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RETROSPECTIVE REVIEW.

I AM fond of a walk through an ancient library, in which the long dim vista is partially illuminated by coloured streaks of light darted through the painted windows, so as to leave the room, here and there, in gloomy shade. How awful and sublime it is to plant one's self in the midst of this dignified silence, with a sombre Gothic roof overhead, and where, all around you, is built up the concentrated knowledge of man! How solemn the reflection, that, here, you stand the only living soul—the only being that breathes, and has power to speak, and can use a pen with his fingers; while, standing so near you, there are thousands of disembodied authors, whose mortal frames have long since sunk into the dust, to which you yourself must ere long be also carried! How transcendent was the idea! how Godlike was the invention! of transferring the greatest minds of the past and passing ages into books—so that, at the distance of hundreds of years, their successors on this ever-shifting stage are enabled to receive their instructions as fresh as from their living lips. How sweet and edifying is the converse which may be held amidst the chequered lights of such a chamber, with the sages of other years! How superior is such an enjoyment to those procured from many of the vain frivolities of the passing world! With what thankfulness do I lay down my friendly monitor!—with what reverence do I commit the instrument of his instruction to its little receptacle, there to remain till again consulted by some similar visitor, probably a century after I shall have joined the spirit with whom I have been meditating. There is something agreeable to the feelings of a living visitor, in these occasional researches amongst the volumes of almost neglected libraries. In the delight of drawing forth and consulting some volume, upon which the dust of years has been permitted to repose, the visitor, if himself engaged in the task of diffusing knowledge by the press, is apt to reflect that, when his works are perhaps consigned to a place in the range of volumes, he may be indebted to some similar enthusiast for the compliment of having his own dust swept away, and his instructions brought once more into actual use. While he is gratifying, as he half supposes, the unseen spirits of the place, he reflectively gratifies himself.—Having lately sauntered, in the mood of mind now described, through a large library of neglected books, I was impressed with the idea, that, to take up a dust-covered volume at random, and communicate to the present generation some part of whatever wisdom it contained, would not only be an act of homage from the living to the dead, in itself highly commendable, but might be attended with much benefit. At the bottom of a neighbouring pilaster lay a tattered volume, of old-fashioned appearance, which seemed to be so much despised, as not to be conceived worthy of a place on the shelves; this, I thought, is a favourable specimen with which to commence my experiment. I therefore took it up, brushed off its coat of dust, and found it to be entitled, "Thoughts, Moral and Divine, upon Various Subjects, by Wellins Calcott, Gent., London." The reader will be able, after perusing the following

extract from its pages, to say whether my resolution be one worthy of being pursued any farther: but, in the meantime, I must express my own admiration of the fine strain of moral feeling which pervades the passage which follows, as well as the simple grandeur of its style. Probably, every successive week, I shall present to my readers a short piece of solemn or pious composition, equally calculated to fill their minds with virtuous or sacred reflection. The subject is *Honour*.

"The nearest way to honour, is, for a man so to live that he might be found to be that in truth he would be thought to be. 'Tis honourable to support the glory of one's ancestors, by actions which correspond with their reputation; and it is also glorious to leave a title to one's descendants which is not borrowed from our predecessors; to become the head and author of our own nobility; and (to use the expression of Tiberius, who was desirous of hiding the defect of birth in Curtius Rufus, though otherwise a very great man) to be born of one's own self.

"True honour is seated in the soul. It rises from a generous heart, and flows with a natural and easy descent into all the different traces of life and channels of duty, refreshing, invigorating, and adorning all the faculties of the soul, the language of the tongue, the very air of the face, and motions of the body. It displays itself in a natural unaffected greatness and firmness of mind, improved by a train of wise and religious reflections, and generous actions, in which personal virtue and real merit truly consist. The Jewish Cabalists had a pretty allegory to express this truth, as founded in the original make and frame of nature. They tell us, that when Moses describes the great river of Eden branching out into four streams, we are to understand by paradise the mind or soul of man. The river was this original fountain of truth and virtue, arising from the very root and essence of the soul, and branching out into the four cardinal virtues, and all the other lower degrees and kinds of virtue—even the inferior morals of affability, politeness, good nature and good manners; and that, in short, there lies hid in the root of every human soul, however defaced by ignorance and deformed by vice, a fund of good, an oracle of truth, which, when assisted by a happy concurrence of external causes, such as, particularly, the structure of the organs and the texture of the blood and spirits, will, by due culture and discipline, naturally exert itself into a train of great, generous, and beneficent actions, suitable to the original grandeur and dignity of its nature. This, in the present debased state of human nature, lies very often buried under the ruins of ignorance and vice, like valuable coins, medals, statues, pillars, and other beautiful ornaments of architecture; or, to speak more properly, that order, symmetry, and proportion, which were as the soul of the structure, lie buried under the ruins of a once famous and magnificent building. Hence it comes to pass, that many an excellent genius is lost to the world—lies hid amongst the rubbish of mankind; who, with proper assistance, due culture, and in a happy situation, might have done honour to human nature, and been a public blessing to mankind. A man of honour, considered in this light, performs not only all the acts of virtue in public and private life, but does them with a peculiar propriety and dignity of behaviour, as the connoisseurs in writing, painting, music, architecture, or even dress, execute even the justest designs, not only with proportion and truth, but with such decorations, embellishments, and graces, as naturally flow from a fine taste, and an improved understanding:—This alone, in high life, makes glorious princes, illustrious heroes, gallant commanders, vigilant magistrates, and honourable counsellors; and, in the lower degree of social life, indulgent husbands, tender fathers, affectionate friends, merciful landlords and masters, faithful tenants and servants; and executes all the relative duties of life with justice and honour. This is the true and real virtue, the only proper foundation of all the honourable distinctions among men in all the different stations of life. The bulk of mankind are caught by noise and show. The pompous sound of

titles and glitter of ornaments strike their senses, attract their attention, raise their admiration, and extort from them all that reverence and regard which are due only to eminent and distinguished merit; while real virtue and true honour pass silently through the world, unheeded and unregarded, but by the happy discerning few who are sensible of its merit, or enjoy the blessed communication of its influence. When those glorious spirits, whom Providence has appointed to be our guardians and protectors in this present state of imperfection and probation, survey the disordered state of human nature, agitated by blind passions, prejudiced by false opinions, into erroneous conclusions and wild pursuits, they view us with the same light, and with the same emotions of compassion and charity, as Monroe did his lunatic patients in Bedlam, who miscall and misapply almost every instance in which their duty and happiness is concerned. To those blessed intelligences, the silent life of a generous, compassionate, beneficent man, is more truly honourable than the pageantry of princes, the pomp of conquerors, and all the glorious impertinence of state. To them, an obscure good man, doing secret acts of charity, relieving the distressed, comforting the miserable, and approving himself, by habits of piety and devotion, to the great Author of his being, appears more truly glorious than the conqueror at the head of an hundred thousand men. To them the man of Ross appears in a fairer light in the Book of Remembrance, and will ever make a much more illustrious figure at the last great day, than Alexander, or Cæsar, or William the Conqueror, though a Christian. For to do good, to be lovers of mankind, to alleviate the distressed, and promote the peace and happiness of our fellow-creatures, is the highest honour, the noblest ambition, that can enter into the heart of man. But the greatest part of mankind judge quite otherwise. Noise and show, title and equipage, glitter and grandeur, constitute the whole idea of honour; and whoever can command an interest sufficient to procure, and an affluence sufficient to support them, becomes thereby not only a man of honour, but even a subordinate fountain of honour to others."

BURNS'S "JOLLY BEGGARS."

THE scene of the "Jolly Beggars" was an hostel in Mauchline of the lowest possible description, to which beggars and vagrants resorted for lodging and food. It was adapted for the entertainment of such characters only, and no other sort of persons ever entered it, excepting, perhaps, such wags as Burns himself, when bent upon amusement, and desirous of seeing the lowest scenes which human nature can exhibit.

At the time Burns composed his poem, there were several houses of this kind in the country. At that period there were infinitely more beggars than at present, and their lodging-houses were of course more numerous. Begging might be said to have been then a much better trade, partly on account of the greater hospitality of the times, and partly by reason of its professors being generally useful in retired places, as news-venders, as tale-tellers, and occasionally as smugglers. The "randie gangrel bodies" of 1785 were therefore a more opulent and riotous class than those of the present degenerate days. They could afford to spend between ten and twenty shillings in a week upon the pleasures of a lodging-house, and to sit at their liquor from Saturday night till Tuesday or Wednesday morning; not that a lodging-house was preferred before other places of abode—as indeed a farmer's stable, loft, or outhouse with a good supper before bed, and their "parritch" in the morning when they rose, was invariably a more delectable object, as being perfectly eleemosynary—but it was generally made a fixed point among them, to taste the luxuries of "Poosie's" hovel at least once a-week, if funds were answerable, in order to refit for the next

campaign, and see their friends. The regularity of their meetings may be authenticated from Burns's own words: "In Poesie Nansie's held the splore;" the use of the definite article indicating that it was a constant custom.

The person who supplies the information contained in this article happened, about the year 1794, to be personally intimate with the scenes so imitatively described in the poem, it being part of his duty as a citizen-constable, to visit, every night, the house to which the Jolly Beggars resorted, to see that every thing was quiet and orderly. To the admirers of the *Cantata* it may be interesting to have a more minute account of this scene in every particular than Burns has given; and though his sketch must fall infinitely short of the poet's outline, he will at least pledge himself to give a faithful transcript of his own recollections.

Poesie Nansie's cottage was a ruinous hovel of one story, with the thatch broken in several places, so that the family were sometimes blessed with the dews of Heaven in the most direct manner. From without, the house appeared to have two windows, one at each side of a low oval-shaped door; so that the contour of the whole bore no small resemblance to the visage of a cat; the two chimneys rising from the roof being supposed to represent the erect ears of the animal. On entering, you were not troubled with the ceremony of an inner-door, nor was there any extent of lobby to traverse. About one yard forward from the outer-door, on turning the corner of a small projection, the whole scene lay exposed to view. One end of the tenement was the room common to all. The price of lodging in this part of the domicile was one penny. The accommodations were of course by no means elegant. Here there was no form of beds; but merely a common heap of straw, of which a couch could be made by the guests themselves, according to their own pleasure, or the means they possessed of dressing it. The straw was squalid to the utmost degree, and chopped so small, by long service, that it was more like chaff than straw. However, a covering of "orra duds" made it quite as pleasant as if it had been less equivocal in its appearance. The chimney stood out from the gable of this apartment, like a pulpit, and almost as large. Here in the evenings, an immense fire was lighted, where Poesie herself—an old, bearded dame—was eternally engaged in cooking, and round which all the wretches gathered, to drink their "dear Kilbagie," &c. The furniture consisted of the merest fragments,—*stools*, originally quadruped, degraded into tripods, and even in some instances, into bipeds,—a long deal table with turned legs, one limb *tethered* to the other to keep the whole from straggling, and propped into a horizontal position by supplementary pegs,—*pots* that, in the course of time, had come to answer completely the fanciful description of the Irishman, "wanting feet, ears, and cheeks, with a hare-lip into the bargain,"—even the articles of *stoneware* seemed to be in the most dilapidated condition; the most of them had ceased to be vessels of quantity, and become mere shreds of plain surface; or if a hollow was attained, it was only at the expense of a larger vessel; for instance, a cup was perhaps fashioned out of the lard-board side of a tureen.

Such was the apartment of Poesie Nansie's house, in which lodging was to be had at the low price of one penny. This was the House of Commons: now for the House of Peers! The House of Peers was the *spence*, or better part of the dwelling, in which the more respectable sort of beggars were deposited, apart from the vulgar throng. A division was accomplished by means of a partition formed of straw, curiously wattled and mixed with clay. The accommodations here were considerably superior to those of the meaner apartment. Here there were actually beds!—beds formed of straw, it is true, but yet possessed of the inestimable advantages of a species of covering like horse-rugs. Here there were also chairs, generally with bottoms, and sometimes even with backs. One side of the Chamber of Peers was entirely occupied by two ranges of beds in tiers; and "the kipples" in this part of the house were covered with a firm footing, and filled with receptacles like "chicken-cavies" ranged all round, which were accessible from below by an infirm trap-stair, fashioned like a hen's ladder. The price of lodging in this magnificent quarter was twopenny.

But what avails it to describe the mere externals of the immortal Poesie Nansie's hostelry, if its internal economy, its wonderful inmates, and its glorious "splores," are to remain undelineated? Oh, for the pen of Burns, to fill up the exquisite outline which he has left us,—to paint a Saturday night scene in all its depth and breadth of colouring, and with that minute faithfulness of touch so necessary to a general comprehension of the whole! Alas, the only hand that could do it justice is torpid and forgetful of its errand! The sun himself is set, and a dim "gloomin'" alone remains, capable of throwing but little light upon the subject. We have promised,

however, to do our best.

As the approach of night calls home all the creatures of animated nature to rest and enjoyment, so, in these good old times, did Saturday night, the sunset of the week, bring to roost all the stray sons of poverty, bent upon compensating, by the festivity of one night, the contumelies, the wanderings, the hunger, cold, pain, and abstinence, of the rest. On that evening, therefore, whole fleets of mendicants might be seen thronging the roads, bound for Poesie Nansie's, to "haud the splore," and pouring in at all the "town-ends" in Mauchline. The oval-shaped door we have described received them within its crater, as the bung-hole in the genie's cask, in the *Arabian Night's Entertainments*, received the vapour into which the fisherman had caused him to dissolve himself. Then would there be recognitions of acquaintance, and the most ceremonious shaking of hands imaginable; for they were always ceremonious, till such time as the ice of politeness was thawed by the genial warmth of a few preliminary drams; when, of course, there was a greater community of friendly feeling throughout. But not more wonders in the dissolution of ceremony did Poesie's Kilbagie achieve, than did her large pulpit-looking fire round which they gathered, in respect of relaxing with equally potent heat the cripplé limbs of the company. It was truly amazing to witness the miracles wrought by Poesie's wonderful fire. The miserable wretch who perished with the rheumatism, and walked double through the week, was cured in an instant, as if the demon of the disease had fled from his bones on coming within the influence of a spell. The "po-or ou-ld bli-d man," who had howled forth the terrible circumstances of his condition, vexing the ears of the lieges, for six long days, suddenly opened his eyes to the blessings before him, as if he had only awoke from a long sleep. The "poor sailor lad," too, who had lost an arm with Rodney, on the glorious 12th of August, 1782, seemed suddenly to forget all the effects of the engagement, and, in the twinkling of a handspike, the long deceased limb sprang from the jacket, into all its pristine health and vigour. More astonishing resurrections than even that took place. Legs accustomed to "limp wi' the spavie," recovered their vigour and proportion. Legs grew down from trunks formerly detroned, and arms sprang from shoulders erst apparently stumps. Immense bloiches that, in week days, excited the commiseration of the charitable, in the character of plague spots upon the skin, at once disappeared, "and, like the baseless fabric of a vision, left not a wreck behind." The man "with a brown leg and a blue one," who had "had the black scurvy in Jamaica, and come home a poor helpless object," became in a moment the soundest and liveliest man in the company; and the wretch who trembled through the week between two crutches, as if every part of his body were taking leave of the other, now shivering with the ague, and at other times agonized by the cramp, threw by his wooden friends and was "himself again." In short, the transformations and cures accomplished at Poesie Nansie's fireside, were miraculous and manifold. Suffice it to say, that the blind saw, the deaf heard, the dumb spoke, (nay, "ranted and sang,") the lame walked,—and all drank. In the latter department, there was not a single inefficient member.

No sooner were the window shutters of night all fairly closed in, and every thing snug, than the festivities of the evening commenced. Tea was paraded by the females of the company, and drunk from *luggies*, *scups* and *tinies*, all of them vessels not easily broken. Fowls and pieces of meat were sometimes produced from secret wallets, and bacon ham was no unusual dish; all of which were hastily prepared by frying,—for they had no delicacy of taste in cooking. To these were added savoury messes, consisting of cold meat, eggs, hares, and other articles of food the most incongruous in association, seasoned highly with salt, pepper, onions, and occasionally garlic. As soon as the feast was pretty well over—for it never could be said to be altogether done—the fiercer debaucheries began, and the hostess was in perpetual demand for supplies of more liquor. Nansie did not retail spirits herself, but procured what was wanted from a neighbouring shop, where she was allowed a small emolument for her custom, which she contrived to increase not a little by cheating her guests of an enormous commission (in kind) for her trouble. Kilbagie was then sold so low as one penny per gill;* of course it was quite possible to get completely intoxicated for four pence. Over this stuff they were wont to carouse till midnight, when the mirth and fun generally grew so fast and furious, that nothing could contain them, and their joy could only find vent in the confusion of a dance, or a squabble. If the former amicable method chanced to be adopted, the floor was cleared in an instant for action. The whole of Nansie's furniture was promiscuously huddled into a corner, and to it they set, men, women, and children, like a parcel of

infuriated Bacchanalians, tossing their limbs wildly about, and using gesticulations, and *setting* into attitudes, that no language can paint. After tiring of this exercise, they would again sit down to deep debauch, and drink till morning light, about which time all that had survived the soporific effects of the liquor, were commonly engaged in a Polymachia, or battle general; which exertion was for the most part quite as effectual in laying the company low, as the Kilbagie. They seemed to fight themselves out, in short; and one by one dropped from the scene, till not a combatant was left. All were on the floor, dead, flat, and peaceable. Sunday morning, which, rising in Scotland, finds all nature reduced to a state of perfect calm, usually found the inmates of Poesie Nansie's hotel in the same circumstances. All was quiet; but it was the quiet of desolation. The whole apartment seemed strewn with the ruins of the human race,—*"reliquiae Danaum,"*—a heterogeneous chaos of carcasses, heads, arms, women, children, wooden legs, and other fragments of humanity, together with the no less disabled pieces of Nansie's furniture, that were in every respect analogous to the strange beings who used them on the preceding evening.

Through the course of Sunday, it was observed that the inmates of Nansie's mansion were wonderfully quiet and orderly. If the weather was good, many put off the day by sitting upon turf seats at the door, smoking and talking; while the children lay half-naked upon the green, amusing themselves with every species of feat and play, like Nereids sporting on the azure wave. In proportion as the debauch or battle of the preceding evening had been fierce and fatal, the conversations of Sunday were harmonious, and the harmony universal. Whatever were the injuries received in the fray, none of them were remembered. It seemed to be then the general wish that an amnesty should be agreed upon, and no revenge taken for former aggressions. At the close of night, however, the splore was again commenced with considerable briskness. But the festivities of this evening never reached within many degrees of their Saturday-night jollifications, in intenseness of enjoyment, or obstreperousness of mirth,—partly for the sake of decorum, partly on account of low finances, and principally because their spirits, which, suppressed through the week, burst out into the most violent expression on Saturday night, were so far exhausted by the first overflow, that little material remained to be expended upon the second. On Monday morning, it was a rich sight to see the capricious wretches take their departure from Mauchline, with empty wallets, sore heads, and sneaking aspects,—so completely spent in every respect by the excesses they had committed, that their wretched appearance looked a thousand times more wretched; and what had formerly seemed only ruins of humanity was now the wreck of ruins.

* Kilbagie was the greatest distillery of spirituous liquors at that time in Scotland. There were then so few others, that more usquebae was produced there, than at all the rest together. It was not of the best quality; but it was the cheapest to be had—and that was a sufficient reason for its being a favourite with Poesie Nansie's clubs.

OLD SCOTTISH MODE OF DISCOVERING MURDER.

In tracing the customs of our ancestors, we alternately pity their superstitious usages, and are amused at the credulity of the legislature, in continuing absurdities which would now be scoffed at even by children. There was a superstitious notion once exceedingly prevalent, regarding the discovery of the murderer by the touch of the dead body. In Germany, this experiment was called *bahr recht*, or the law of the bier, because, the murdered body being stretched upon a bier, the suspected person was obliged to put one hand upon the wound, and the other upon the mouth of the deceased, and, in that posture, call upon heaven to attest his innocence. If, during this ceremony, the blood gushed from the mouth, nose, or wound, a circumstance not unlikely to happen in the course of shifting or stirring the body, it was held sufficient evidence of the guilt of the party. The same singular kind of evidence was admitted in the Scottish Criminal Courts, at the short distance of little more than a century. Fountainhall relates a most dreadful instance of this perversion of jurisprudence. The case was that of Philip Stanfield, tried upon the 30th November, 1687, for cursing his father, (which, by the Scottish law, is a capital crime, Act 1661, chap. 20,) and for being accessory to the murder. Sir James Stanfield, the deceased, was a person of melancholy temperament; so that, when his body was found in a pond near his own house of Newmilns, he was at first generally supposed to have drowned himself. But the body having been hastily buried, a report arose that he had been strangled by ruffians, instigated by his son Philip, a profligate youth, whom he had disinherited, on account of his gross debauchery. Upon this rumour, the Privy Council granted warrant

as two surgeons of character, named Crawford and Muirhead, to dig up the body, and to report the state in which they should find it. Philip was present on this occasion, and the evidence of both surgeons bears distinctly, that he stood for some time at a distance from the body of his parent; but, being called upon to assist in stretching out the corpse, he put his hand to the head, when the mouth and nostrils instantly gushed with blood. This circumstance, with the evident symptoms of terror and remorse exhibited by young Stanfield, seems to have had considerable weight with the jury, and is thus stated in the indictment:—"That his (the deceased's) nearest relatives being required to lift the corpse into the coffin, after it had been inspected, upon the said Philip Stanfield touching of it, (according to God's usual mode of discovering murder,) it bled afresh upon the said Philip; and that thereupon he let the body fall, and fled from it in the greatest consternation, crying, 'Lord have mercy upon me!'" The prisoner was found guilty of being accessory to the murder of his father, although there was little more than strong presumptions against him. It is true, he was at the same time separately convicted of the distinct crimes of having cursed his father, and drunk damnation to the monarchy and hierarchy. His sentence, which was to have his tongue cut out, and hand struck off, previous to his being hanged, was executed with the utmost rigour. He denied the murder with his last breath. "It is," says a contemporary judge, "a dark case of divination, to be remitted to the great day, whether he was guilty or innocent. Only, it is certain he was a bad youth, and may serve as a beacon to all profligate persons."

ORIGIN AND PROGRESS OF THE ART OF PRINTING.

The exceedingly ingenious invention of printing with metal types, on paper, was first brought to light in Germany, a country lying near the heart of the continent of Europe, and most remarkable in the history of mankind for having furnished not only this, but some other very important improvements in the mechanical arts. Until this invention took place, in the course of the fifteenth century, no nation in the world possessed a distinct knowledge of its neighbour, or was even acquainted with its own internal properties. All communications had to be effected by means of writing, or by special messengers, and the knowledge gleaned by one generation ran always a risk of being lost to those which came after it, for want of a permanent medium of communication. To investigate properly, says Hansard, the origin of printing, it is necessary to carry our research to a period far more remote than that at which the art became applicable to the making of books. The early inhabitants of the earth would naturally desire to perpetuate their useful discoveries, as well as the important events of their time; and it may be therefore fairly presumed, that they had some mode of communicating their ideas to succeeding generations before the invention of an alphabet. The scanty traditions received concerning the antediluvians do not enable us to come to any determination relative to their proficiency in communicating the transactions of their time; whether, therefore, they employed stamps of any kind, or had any means whatever of transmitting knowledge, except by oral tradition, we have neither history nor relics to inform us. But that period which immediately followed the Deluge, and which some chronologists have termed the second age of the world, affords convincing proofs of the art of forming impressions being then practised; and most probably with a view to propagate science—to inculcate special facts—and as a general means of preserving to posterity certain useful memorials. Purposes such as these, it is reasonable to conclude, were contemplated by the ancient Chaldeans when they stamped, or printed, their tiles or bricks with various figures, hieroglyphics, or inscriptions. In some instances, these ancient specimens seemed to have been sun-baked; yet, for the most part, they appear kiln-burnt to a surprising degree of hardness, even to partial vitrification. Of such materials was built the original city, and celebrated tower of Babylon; and although a period of four thousand years has rolled away since the construction of the superb metropolis, whose name they bear still, even to the present day do the Babylonian bricks, which have supplied the antiquary and orientalist with so many curious subjects for reflection and discussion, continue to be found. The great city—"whose towers, whose temples, and whose palaces, were built with brick dried in the sun, or baked in the furnace," and whose walls were ornamented with animals modelled to resemble life, richly painted in their natural colours upon the bricks of which they were composed and into which they were afterwards burnt—what inexhaustible emotions must the spectacle of oporeal splendour presented by the real pile, at the zenith of its glory have excited! And what must reasoning creatures think of human grandeur, looking now at the bald and desolate site that once boasted such a display of sumptuous edifices—such a gorgeous scene of civic ostentation!

[The foregoing is offered as the first of a series of short papers on the origin, progress, and perfection of the art of printing with metal types. This has been one of the noblest inventions of man and, I think, by far too little is generally known of it. The mass of curious and instructive particulars before me on this interesting subject is very considerable, consisting of the very best works and papers on printing. I design to trace the invention through its preliminary stages—to describe how it was finally brought to light—the first books printed—the earliest foreign and British printers—the original and improved processes—the modern improvement—ending with what may be called the sublimation of the art, its printing sheets by steam at the rate of some thousands in the hour. In the latter department I shall be assisted by an intelligent practical printer.]

LADY JEAN.

Concluded from No. I.

When the ceremony was concluded, and both the clergy

men and the witnesses had been satisfied and dismissed, the lovers left the house, with the design of walking forwards into the city. In conformity to a previous arrangement, Lady Jean walked first, like a lady of quality, and Richard followed closely behind, with the dress and deportment of her servant. Her ladyship was dressed in her finest suit, and adorned with her finest jewels, all which she had brought from Cumbernauld on purpose, in a mail or leathern trunk—for such was the name then given to the convenience now entitled a portmanteau. Her step was light, and her bearing gay, as she moved along,—not on account of the success which had attended her expedition, or her satisfaction in being now united to the man of her choice, but because she anticipated the highest pleasure in the sight of a place whereof she had heard such wonderful stories, and with a participation in whose delights she had been so long withheld. Like all persons educated in the country, she had been regaled in her infancy with magnificent descriptions of the capital,—of its buildings that seemed to mingle with the clouds,—its shops, which apparently contained more wealth than all the world beside,—of its paved streets, (for paved streets were then wonders in Scotland,)—and above all of the grand folks who thronged its Highgates, its Canongates, and its Cowgates—people whose lives seemed a perpetual holiday, whose attire was ever new, and who all lived in their several palaces. Though, of course, Edinburgh had then little to boast of, the country people who occasionally visited it did not regard it with less admiration than that with which the peasantry of our own day may be supposed to view it now that it is something so very different. It was then, as well as now, the capital of the country, and, as such, bore the same disproportion in point of magnificence to inferior towns, and to the country in general. In one respect, it was superior to what it is at the present day,—namely, in being the seat of government and of a court. Lady Jean had often heard all its glorious peculiarities described by her sisters, who, moreover, sometimes took occasion to colour the picture too highly, in order to raise her envy, and make themselves appear great in their alliance and association with so much greatness. She was, therefore, prepared to see a scene of the utmost splendour—a scene in which nothing horrible or paltry mingled, but which was altogether calculated to awe or to delight the senses.

Her ladyship was destined to be disappointed at the commencement, at least, of her acquaintance with the city. The first remarkable object which struck her eye, after leaving the inn, was the high bow, or arch, of the gate called the West Port. In this itself there was nothing worthy of particular attention, and she rather directed her eyes through the opening beneath, which half disclosed a wide space beyond, apparently crowded with people. But when she came close up to the gate and cast, before passing, a last glance at the arch, she shuddered at the sight then presented to her eyes. On the very pinnacle of the arch was stuck the ghastly and weatherworn remains of a human head, the features of which, half flesh half bone, were shaded and rendered still more indistinctly horrible by the long dark hair, which hung in meagre tresses around them. "Oh, Richard, Richard!" she exclaimed, stopping and turning round, "what is that dreadful looking thing?"—"That, madam," said Richard, without any emotion, "is the broken remnant of a west country preacher, spiked up there to warn his countrymen who may approach this port, against doing any thing to incur the fate which has overtaken himself. Methinks he has preached to small purpose, for yonder stands the gallows, ready, I suppose, to bring him some brother in affliction."—"Horrible!" exclaimed Lady Jean; "and is this really the fine town of Edinburgh, where I was taught to expect so many grand sights? I thought it was just one universal palace, and it turns out to be a great charnel-house!"—"It is indeed more like that than any thing else at times," said Richard; "but, my dear Lady Jean, you are not going to start at this bugbear, which the very children, you see, do not heed in passing."—"Indeed I think, Richard," answered her ladyship, "if Edinburgh is to be all like this, it would be just as good to turn back at once, and postpone our visit till better times."—"But it is not all like this," replied Richard; "I assure you it is not. For Heaven's sake, my lady, move on. The people are beginning to stare at us. You shall soon see grand sights enough, if we were once fairly out of this place. Make for the opposite corner of the Grassmarket, and ascend the street to the left of that horrible gibbet. We may yet get past it before the criminals are produced."

Thus admonished, Lady Jean passed, not without a shudder, under the dreadful arch, and entered the spacious oblong square called the Grassmarket. This place was crowded at the west end with rustics engaged in all the bustle of a grain and cattle market, and at the eastern and most distant extremity with a mob of idlers who had gathered around the gibbet in order to witness the awful ceremony that was about to take place. The crowd, which was scarcely so dense as that which attends the rarer scene of a modern execution, made way on both sides for Lady Jean as she moved along; and wherever she went she left behind her a wake, as it were, of admiration and confusion. So exquisite and so new a beauty, so splendid a suit of female attire, and such a stout and handsome attendant—these were all alike calculated to inspire reverence in the minds of the beholders. Her carriage at the same time was so steady and so graceful, that no one could be so rude as to interrupt or disturb it. The people, therefore, parted when she approached, and left a free passage for her on all sides, as if she had been an angel or a spirit come to walk amidst a mortal crowd, and whose person could not be touched, and might scarcely

be beheld—whose motions were not to be interfered with by those among whom she chose to walk—but who was to be received with prostration of spirit, and permitted to depart as she had come, unquestioned and unapproached. In traversing the Grassmarket, two or three young cock-combs, with voluminous wigs, short cloaks, rapiers, and rose-knots at their knees and shoes, who, on observing her at a distance, had prepared to treat her with a condescending stare, fell back, awed and confounded, at her near approach, and spent the gaze, perhaps, upon the humbler mark of her follower, or upon vacancy.

Having at length passed the gibbet, Lady Jean began to ascend the steep and tortuous street denominated the West Bow. She had hitherto been unable to direct any attention to what she was most anxious to behold,—the scenic wonders of the capital. But having now got clear of the crowd, and no longer fearing to see the gallows, she ventured to lift up her eyes and look around. The tallness and massiveness of the buildings, some of which bore the cross of the Knights Templars on their pinnacles, while others seemed to be surmounted or overtopped by still taller edifices beyond, impressed her imagination; and the effect was rendered still more striking by the countless human figures which crowded the windows, and even the roofs of the houses, all alike bending their attention, as she thought, towards herself. The scene before her looked like an amphitheatre, filled with spectators, while she and Richard seemed as the objects upon the arena. The thought caused her to hurry on, and she soon found herself in a great measure screened from observation by the overhanging projections of the narrower part of the West Bow, which she now entered. With slow and difficult, but stately and graceful steps, she then proceeded, till she reached the upper angle of the street, where a novel and unexpected scene awaited her. A sound like that of rushing waters seemed first to proceed from the part of the street still concealed from her view, and presently appeared round the angle, the first rank of an impetuous crowd, who, rushing downward with prodigious force, would certainly have overwhelmed her delicate form, had she not dexterously avoided them, by stepping aside upon a projecting stair, to which Richard also sprang, just in time to save himself from a similar fate. From this place of safety, which was not without its own crowd of children, women, and sage-looking elderly mechanics, with Kilmarnock cows, both, in the next moment saw the massive mob rush past, like the first wave of a flood, bearing either along or down every thing that came in their way. Immediately after, but at a more deliberate pace, followed a procession of figures, which struck the heart of Lady Jean with as heavy a sense of sorrow as the crowd had just impressed with terror and surprise. First came a small company of the veterans of the city guard, some of whom had perhaps figured in the campaigns of Middleton and Montrose, and whose bronzed inflexible faces bore on this melancholy occasion precisely the same expression which they ordinarily exhibited on the joyful one of attending the magistrates at the drinking of the king's health on the 29th of May. Behind these, and encircled by some other soldiers of the same band, appeared two figures of a different sort. One of them was a young looking, but pale and woe-worn man, the impressive wretchedness of whose appearance was strikingly increased by the ghastly dress which he wore. He was attired from head to foot in a white shroud, such as was sometimes worn in Scotland by criminals at the gallows, but which was, in the present instance, partly assumed as a badge of innocence. The excessive whiteness and emaciation of his countenance suited well with this dismal apparel, and, with the wild enthusiasm that kindled in his eyes, gave an almost supernatural effect to the whole scene, which rather resembled a pageant of the dead than a procession of earthly men. He was the only criminal: the person who walked by his side, and occasionally supported his steps, being—as the crowd whispered around, with many a varied expression of sympathy—his father. The old man had the air of a devout Presbyterian, with harsh, intelligent features, and a dress which bespoke his being a countryman of the lower rank. According to the report of the bystanders, he had educated this, his only son, for the unfortunate Church of Scotland, and now attended him to the fate which his talents and violent temperament had conspired to draw down upon his head. If he ever felt any pride in the popular admiration with which his son was honoured, no traces of such a sentiment now appeared. On the contrary, he seemed humbled to the very earth with sorrow; and though he had perhaps contemplated the issue now about to take place, with no small portion of satisfaction, so long as it was at a distance and uncertain, the feelings of a father had evidently proved too much for his fortitude, when the event approached in all its dreadful reality. The emotions perceptible in that rough and rigid countenance were the more striking, as being so much at variance with its natural and characteristic expression; and the tear which gathered in his eye excited the greater commiseration, in so far as it seemed a stranger there. But the hero and heroine of our tale had little time to make observations on this piteous scene, for the train passed quickly on, and was soon beyond their sight. When it was gone, the people of the Bow, who seemed accustomed to such sights, uttered various expressions of pity, indignation, and horror, according to their respective feelings, and then slowly retired to their dens in the stairs and booths which lined the whole of this ancient and singular street.

Lady Jean, whose beautiful eyes were suffused with tears at beholding so melancholy a spectacle, was then admonished by her attendant to proceed. With a heart deadened to all sensations of wonder and delight, she moved forward, and was soon ushered into the place called the Lawnmarket,

then perhaps the most fashionable district in Edinburgh but the grandeur and spaciousness of which she beheld almost without admiration. The scene here was, however, much gay, and approached more nearly to her splendid preconceptions of the capital than any she had yet seen. The shops were, in her estimation, very fine, and some of the people on the street were of that noble description of which she had believed all inhabitants of cities to be. There was no crowd on the street, which, therefore, afforded room for a better display of her stately and beautiful person; and as she walked steadily onwards, still asked (for such was then the phrase) by her handsome and noble-looking attendant, a greater degree of admiration was excited amongst the gay idlers whom she passed, than even that which marked her progress through the humbler crowd of the Grassmarket. Various noblemen, in passing towards their homes in the Castle Hill, lifted their feathered hats and bowed profoundly to the lovely vision; and one or two magnificent dames, sweeping along with their long silk trains, borne up by livery-men, stared at or eyed askance the charms which threw their own so completely into shade. By the time Lady Jean arrived at the bottom of the Lawnmarket, that is to say, where it was partially closed up by the Tolbooth, she had in a great measure recovered her spirits, and found herself prepared to enjoy the sight of the public buildings, which were so thickly clustered together at this central part of the city. She was directed by Richard to pass along the narrow road which then led between the houses and the Tolbooth on the south, and which, being continued by a still narrower passage skirting the west end of St. Giles's church, formed the western approach to the Parliament Close. Obeying his guidance in this tortuous passage, she soon found herself at the opening of the square space, so styled on account of its being closed on more than one side by the meeting-place of the legislative assembly of Scotland. Here a splendid scene awaited her. The whole square was filled with the members of the Scottish Parliament, barons and commons, who had just left the house in which they sat together,—with ladies, who on days of unusual ceremony were allowed to attend the house,—and with horses richly-caparisoned, and covered with gold embroidered foot-cloths, some of which were mounted by their owners, while others were held in readiness by footmen. All was bustle and magnificence. Noblemen and gentlemen in splendid attire threaded the crowd in search of their horses; ladies tripped after them with timid and careful steps, endeavouring, by all in their power, to avoid contact with such objects as were calculated to injure their fineries; grooms strode heavily about, and more nimble lacqueys jumped everywhere, here and there, some of them as drunk as the Parliament Close claret could make them, but all intent on doing the duties of attendance and respect to their masters. Some smart and well-dressed young gentlemen were arranging their cloaks and swords, and preparing to leave the square on foot, by the passage which had given entry to Master Richard and Lady Jean.

At sight of our heroine, most of these gallants stood still in admiration, and one of them, with the trained assurance of a rake, observing her to be beautiful, a stranger, and not too well protected, accosted her in a strain of language which caused her at once to blush and tremble. Richard's brow reddened with anger, as he hesitated not a moment in stepping up and telling the offender to leave the lady alone, on pain of certain consequences which might not prove agreeable. "And who are you, my brave fellow?" said the youth, with bold assurance. "Sirrah!" exclaimed Richard, so indignant as to forget himself, "I am that lady's husband—her servant, I mean; and here he stopped short in some confusion. "Admirable!" exclaimed the other. "Ha! ha! ha! ha! Here, Sirs, is a lady lacquey, who does not know whether he is his mistress's servant or her husband. Let us give him up to the Town-guard to see whether the black-hole will make him remember the real state of the case. So saying, he attempted to push Richard aside and take hold of the lady. But he had not time to touch her garments with so much as a finger, before her protector had a rapier flourishing in his eyes, and threatened him with instant death, unless he desisted from his profane purpose. At sight of the bright steel, he stepped back one or two paces, drew his own sword, and was preparing to fight, when one of his more grave associates called out, "For shame, Rollo!—with a lady's lacquey, too, and in the presence of the Duke and Duchess! I see their Royal Highnesses, already alarmed, are inquiring the cause of the disturbance." It was even as this gentleman said, and presently came up to the scene of contention some of the most distinguished personages in the crowd, one of whom demanded from the parties an explanation of so disgraceful an occurrence. "Why, here is a fellow, my lord," answered Rollo, "who says he is the husband of a lady whom he attends as a liveryman, and a lady, too, the bonniest, I dare say, that has been seen in Scotland since the days of Queen Magdalen!"—"And what matters it to you," said the inquirer, who seemed to be a Judge of the Session, "in what relation this man stands to his lady? Let the parties both come forward, and tell their tale. May it please your Royal Highnesses," he continued, addressing a very grave dignitary who sat on horseback behind him, as stiff and formal as a signpost, "to hear the declaration of this two strange incomers—But see—see—what is the matter with Lord Wigton?" he added, pointing to an aged personage on horseback, who had just passed forward, and seemed about to faint, and fall from his horse. The person alluded to, at sight of his daughter in this unexpected place, was, in reality, confounded, and it was some time before he mastered voice enough to ejaculate, "O, Jean, Jean! what's this ye've been about? or what has brought you to Edinburgh?"—"And Lord have a care of us!" exclaimed at this juncture another venerable peer, who had just come up, "what has brought my son's son, Ritchie Livingstone, to Edinburgh? when he should have been fechtin the Dutch by

this time in Pennsylvania!" The two lovers, thus recognized by their respective parents, stood with downcast looks, and perfectly silent, while all was buzz and confusion in the brilliant circle around them; for the parties concerned were not more surprised at the aspect of their affairs, than were all the rest at the beauty of the far-famed, but hitherto unseen, Lady Jean Fleming. The Earl of Linlithgow, Richard's father, was the first to speak aloud, after the general astonishment had for some time subsided; and this he did in a laconic though important query, which he couched in the simple words, "Are you married, bairns?" "Yes, dearest father," said his son, gathering courage, and coming close up to his saddle-bow; "and I beseech you to extricate Lady Jean and me from this crowd, and I shall tell you all when we are alone."—"A pretty man ye are, truly," said the old man, who never took any thing very seriously to heart, "to be staying at home, and getting yourself married, all the time you should have been abroad, winning honour and wealth, as your gallant grand-uncle did wi' Gustavus i' the thirties! However, since better mayna be, I maun try and console my Lord Wigton, who, I doot, has the worst o' the bargain, ye ne'er-doweel!" He then went up to Lady Jean's father, shook him by the hand, and said, "that though they had been made relations against their wills, he hoped they would continue good friends. The young people," he observed, "are no that ill-matched; and it is not the first time that the Flemings and the Livingstones have melled together, as witness the blythe marriage of the Queen's Marie to Lord Fleming, in the fifteen-sixty-five. At any rate, my lord, let us put a good face on the matter, afore their glowing gentles, and whipper-snapper Duchesses, I'll get horses for the two, and they'll join the ridin' down the street; and de'il ha'e me, if Lady Jean dinna outshine them, the hale o' them!"—"My Lord Linlithgow," responded the graver and more implacable Earl of Wigton, "it may set you to take this matter blithely; but, let me tell you, it's a muckle mair serious affair for me. What think ye am I to do wi' Kate and Grizy noo?"—"Hoot, toot, my Lord," said Linlithgow, with a sly smile, "their chance is as gude as ever it was, I assure you, and sae will every body think that kens them. I maun ca' horses though, or the young folk will be ridden ower, afore ever they do mair gude, by thae rampagin young men." So saying, and taking Lord Wigton's moody silence for assent, he proceeded to cry to his servants for the best pair of horses they could get; and these being speedily procured, Lord Richard and his bride were requested to mount; after which they were formally introduced to the gracious notice of the Duke and Duchess of York, and the Princess Anne, who happened to attend Parliament on this the last day of its session, when it was customary for all the members to ride both to and from the House in an orderly cavalcade. The order was now given to proceed, and the lovers were soon relieved, in a great measure, from the embarrassing notice of the crowd, by assuming a particular place in the procession, and finding themselves confounded with more than three hundred equally splendid figures. As the pageant, however, moved down the High Street, in a continuous and open line, it was impossible not to distinguish the singular loveliness of Lady Jean, and the gallant carriage of her husband, from all the rest. Accordingly, the very trained bands and city guard, who lined the street, and who were, in general, quite as insensible to the splendours of the Riding, as are the musicians in a modern orchestra to the wonders of a melo-drama in its fortieth night,—even they perceived and admired the graces of the young couple, whom they could not help gazing after with a stupid and lingering delight. From the windows, too, and the stair-heads, their beauty was well observed, and amply conjectured and commented on; while many a young cavalier endeavoured, by all sorts of pretences, to find occasion to break the order of the cavalcade, and get himself haply placed nearer to the exquisite figure, of which he had got just one killing glance in the square. Slowly and majestically the brilliant train paced down the great street of Edinburgh,—the acclamations of the multitude ceaselessly expressing the delight which the people of Scotland felt in this sensible type and emblem of their ancient independence. At length they reached the court-yard of Holyrood-house, where the Duke and Duchess invited the whole assemblage to a ball, which they designed to give that evening in the hall of the palace; after which, all departed to their respective residences throughout the town, Lords Wigton and Linlithgow taking their young friends under their immediate protection, and seeking the residence of the former nobleman, a little way up the Canon-gate. In riding thither, the lovers had leisure to explain to their parents the singular circumstances of their union, and address enough to obtain unqualified forgiveness for their imprudence. On alighting at Lord Wigton's house, Lady Jean found her sisters confined to their rooms with headaches, or some such serious indisposition, and in the utmost dejection on account of having been thereby withheld from the Riding of the Parliament. Their spirits, as may be supposed, were not much elevated, when, on coming forth in dishabille to welcome their sister, they found she had had the good fortune to be married before them. Their ill luck was, however, irremediable; and so, making a merit of submitting to it, they condescended to be rather agreeable during the dinner and the afternoon. It was not long before all parties were perfectly reconciled to what had taken place; and by the time it was necessary to dress for the ball, the elder young ladies declared themselves so much recovered as to be able to accompany their happy sister. The Earl of Linlithgow and his son then sent a servant for proper dresses, and prepared themselves for the occasion without leaving the house. When all were ready, a number of chairs were called to transport their dainty persons down the street. The news of Lady Jean's arrival, and of her marriage, having now spread abroad, the court in front of the house, the alley, and even the open street, were crowded with people of all ranks, anxious to catch a passing glimpse

of the heroine or so strange a tale. As her chair was carried along, a buzz of admiration from all who were so happy as to be near it, marked its progress. Happy, too, was the gentleman who had the good luck to be near her chair as it was set down at the palace gate, and assist her in stepping from it upon the lighted pavement. From the outer gate, along the piazza of the inner court, and all the way up the broad staircase to the illuminated hall, two rows of noblemen and gentlemen formed a brilliant avenue, as she passed along, while an hundred plumed cavaliers were doffed in honour of so much beauty, and as many youthful eyes glanced bright with satisfaction at beholding it. The object of all this attention tripped modestly along in the hand of the Earl of Linlithgow, acknowledging, with many a graceful flexure and undulation of person, the compliments of the spectators. At length the company entered the spacious and splendid room in which the ball was to be held. At the extremity opposite to the entry, upon an elevated platform, sat the three royal personages, all of whom, on Lady Jean's introduction, rose and came forward to welcome her and her husband to the entertainments of Holyrood, and to hope that her ladyship would often adorn their circle. In a short time the dancing commenced; and amidst all the ladies who exhibited their charms and their magnificent attire in that captivating exercise, who was, either in person or dress, half so brilliant as Lady Jean?

A DERBYSHIRE TALE.—About twenty or thirty years since, a gentleman named Webster, who lived in the Woodlands, a wild uncultivated barren range of hills in Derbyshire, bordering upon the confines of Yorkshire, had occasion to go from home. The family, besides himself, consisted of the servant man, a young girl, and the housekeeper. At his departure he gave his man a strict charge to remain in the house, along with the females, and not on any account to absent himself at night, until his return. This the man promised to do; and Mr. Webster proceeded on his journey. At night, however, the man went out, notwithstanding all the earnest entreaties and remonstrances of the housekeeper to the contrary, and not coming in, she and the servant girl at the usual time went to bed. Some time in the night, they were awakened by a loud knocking at the door. The housekeeper got up, went down stairs, and inquired who was there, and what was their business? She was informed that a friend of Mr. Webster being lighted, and the night wet and stormy, requested a night's lodging. She forthwith gave him admittance, roused up the fire, led his horse into the stable, and then returned to provide something to eat for her guest, of which he partook, and was then shown to his chamber. On returning to the kitchen, she took up his greatcoat in order to dry it, when perceiving it to be, as she thought, very heavy, curiosity prompted her to examine the pockets, in which she found a brace of loaded pistols, and their own large carving knife! Thunderstruck by this discovery, she immediately perceived what sort of a guest she had to deal with, and his intentions. However, summoning up all her courage and resolution, she proceeded softly up stairs, and, with a rope, fastened, as well as she could, the door of the room in which the villain was; then went down, and in great perturbation of mind awaited the event. Shortly after a man came to the window, and in a low, but distinct tone of voice, said, "are you ready?" She grasped one of the pistols with a desperate resolution—presented it to his face—and fired! The report of the pistol alarmed the villain above, who attempted to get out of the room, but was stayed in his purpose by her saying, "Villain, if you open the door, you are a dead man." She then sent the servant girl for assistance, while she remained, with the other pistol in her hand, guarding the chamber door. When help arrived, the villain was taken into custody; and, on searching without, they found the servant man shot dead. Another villain who was taken shortly after, met with his deserts; and the housekeeper, who had acted with such fidelity and such unparalleled intrepidity, was soon after united to Mr. Webster.

BIOGRAPHIC SKETCHES.

JAMES FERGUSON.

IN the first number of the Journal, I presented a sketch of the life and character of our late distinguished townsman, Dr. Adam, in whom genius was early manifested, and ultimately rewarded. I may now offer a similar biographic sketch of our illustrious countryman, James Ferguson, the Astronomer. These, I hold up to my juvenile friends as patterns truly worthy of their imitation; and fully impressed with the conviction that such sketches may be found beneficial, I shall, in the language of the author of a work entitled "the Pursuit of Knowledge under Difficulties," continue to select, from the records of philosophy, literature, and art, in all ages and countries, a body of examples, to show how the most unpropitious circumstances have been unable to conquer an ardent desire for the acquisition of knowledge. Every man has difficulties to encounter in this pursuit; and, therefore, every man is interested in learning what are the real hindrances which have opposed themselves to the progress of some of the most distinguished persons, and how those obstacles have been surmounted. The love of knowledge will, of itself, do a great deal towards its acquisition; and if it exist with that force and constancy which it exhibits in the characters of all truly great men, it will induce that ardent but humble spirit of observation and inquiry, without which there can be no success.

"Among self-educated men there are few who claim more of our admiration than the celebrated James Ferguson. If ever any one was literally his own instructor in the very elements of knowledge, it was he. Acquisitions that have scarcely in any other case, and, probably, never by one so young, been made without the assistance either of books or a living teacher, were the discoveries of his solitary and almost illiterate boyhood. There are

few more interesting narratives in any language than the account which Ferguson himself has given of his early history. He was born in the year 1710, a few miles from the village of Keith, in Banffshire; his parents, as he tells us, being in the humblest condition of life, (for his father was merely a day-labourer), but religious and honest. It was his father's practice to teach his children himself to read and write, as they successively reached what he deemed the proper age; but James was too impatient to wait till his regular turn came. While his father was teaching one of his elder brothers, James was secretly occupied in listening to what was going on; and, as soon as he was left alone, used to get hold of the book, and work hard in endeavouring to master the lesson which he had thus heard gone over. Being ashamed, as he says, to let his father know what he was about, he was wont to apply to an old woman who lived in a neighbouring cottage to solve the difficulties. In this way he actually learned to read tolerably well before his father had any suspicion that he knew his letters. His father, at last, very much to his surprise, detected him one day reading by himself, and thus found out his secret.

"When he was about seven or eight years of age, a simple incident occurred which seems to have given his mind its first bias to what became afterwards its favourite kind of pursuit. The roof of the cottage having partially fallen in, his father, in order to raise it again, applied to it a beam, resting on a prop in the manner of a lever, and was thus enabled, with comparative ease, to produce what seemed to his son quite a stupendous effect. The circumstance set our young philosopher thinking; and, after a while, it struck him that his father, in using the beam, had applied his strength to its extremity, and this, he immediately concluded, was, probably, an important circumstance in the matter. He proceeded to verify his notion by experiment; and having made several levers, which he called bars, soon not only found that he was right in his conjecture, as to the importance of applying the moving force at the point most distant from the fulcrum, but discovered the rule, or law of the machine, namely, that the effect of any form or weight made to bear upon it is always exactly proportioned to the distance of the point on which it rests from the fulcrum. 'I then,' says he, 'thought that it was a great pity that by means of this bar, a weight could be raised but a very little way. On this, I soon imagined that, by pulling round a wheel, the weight might be raised to any height, by tying a rope to the weight, and winding the rope round the axle of the wheel; and that the power gained must be just as great as the wheel was broader than the axle was thick; and found it to be exactly so, by hanging one weight to a rope put round the wheel, and another to the rope that coiled round the axle.' The child had thus, it will be observed, actually discovered two of the most important elementary truths in mechanics,—the lever, and the wheel and axle; he afterwards hit upon others; and all the while, he had not only possessed neither book nor teacher to assist him, but was without any other tools than a simple turning lathe of his father's, and a little knife wherewith to fashion his blocks and wheels, and the other contrivances he needed for his experiments. After having made his discoveries, however, he next, he tells us, proceeded to write an account of them; thinking his little work, which contained sketches of the different machines drawn with a pen, to be the first treatise ever composed of the sort. When, some time after, a gentleman shewed him the whole in a printed book, although he found that he had been anticipated in his inventions, he was much pleased, as he was well entitled to be, on thus perceiving that his unaided genius had already carried him so far into what was acknowledged to be the region of true philosophy.

"It is a ludicrous blunder that the French astronomer, Lalande, makes, in speaking of Ferguson, when he designates him, as '*Berger ou Roi d'Angleterre en Ecosse*,' the King of England's Shepherd for Scotland. He had no claim to this pompous title; but it is true that he spent some of his early years as a keeper of sheep, though in the employment not of the state, but of a small farmer in the neighbourhood of his native place. He was sent to this occupation, he tells us, as being of weak body; and while his flock was feeding around him, he used to busy himself in making models of mills, spinning-wheels, &c., during the day, and in studying the stars at night like his predecessors of Chaldea. When a little older, he went into the service of another farmer, a respectable man called James Glashan, whose name well deserves to be remembered. After the labours of the day, young Ferguson used to go at night to the fields, with a blanket about him, and a lighted candle, and there, laying himself down on his back, pursued, for long hours, his observations on the heavenly bodies. 'I used to stretch,' says he, 'a thread, with small beads on it, at arm's length between my eye and the stars, sliding the beads upon it till they hid such and such stars from my eye, in order to take their apparent distances from one another; and then laying the thread down on a paper, I marked the stars thereon by the beads.' 'My master,' he adds, 'at first laughed at me; but when I explained my meaning to him, he encouraged me to go on; and, that I might make fair copies in the day-time of what I had done in the night, he often worked for me himself. I shall always have a respect for the memory of that man. Having been employed by his master to carry a message to Mr. Gilchrist, the minister of Keith, he took with him the drawings he had been making, and shewed them to that gentleman. Mr. Gilchrist, upon this, put a map into his hands, and having supplied him with compasses, ruler, pens, ink, and paper, desired him to take it home with him, and bring back a copy of it. 'For this pleasant employment,' says he, 'my master gave me more time than I could reasonably expect; and often took the threshing-fail out of my hands, and worked himself, while I sat by him in the barn, busy

with my compasses, ruler, and pen.' This is a beautiful, we may well say, and even a touching picture,—the good man so generously appreciating the worth of knowledge and genius, that, although the master, he voluntarily exchanges situations with his servant, and insists upon doing the work that must be done, himself, in order that the latter may give his more precious talents to their more appropriate vocation. We know not that there is on record an act of homage to science and learning more honourable to the author.

"Having finished his map, Ferguson carried it to Mr. Gilchrist's, and there he met Mr. Grant of Achynamey, who offered to take him into his house, and make his butler give him lessons. 'I told Squire Grant,' says he, 'that I should rejoice to be at his house, as soon as the time was expired for which I was engaged with my present master. He very politely offered to put me in my place, but this I declined.' When the period in question arrived, accordingly, he went to Mr. Grant's, being now in his twentieth year. Here he found both a good friend and a very extraordinary man in Cantley, the butler, who had first fixed his attention, by a sun-dial which he happened to be engaged in painting on the village school-house, as Ferguson was passing along the road, on his second visit to Mr. Gilchrist. Dialecting, however, was only one of the many accomplishments of this learned butler, who, Ferguson assures us, was profoundly conversant both with arithmetic and mathematics; played on every known musical instrument except the harp; understood Latin, French, and Greek; and could let blood, and prescribe for diseases. These multifarious attainments he owed, we are told, entirely to himself and to nature; on which account, Ferguson designates him 'God Almighty's scholar.'

"From this person Ferguson received instructions in Decimal Fractions and Algebra, having already made himself master of Vulgar Arithmetic, by the assistance of books. Just as he was about, however, to begin Geometry, Cantley left his place for another in the establishment of the Earl of Fife, and his pupil thereupon determined to return home to his father.

"Cantley, on parting with him, had made him a present of a copy of Gorton's Geographical Grammar. The book contains a description of an artificial globe, which is not, however, illustrated by any figure. Nevertheless, 'from this description,' says Ferguson, 'I made a globe in three weeks at my father's, having turned the ball thereof out of a piece of wood; which ball I covered with paper, and delineated a map of the world upon it; made the meridian ring and horizon of wood, covered them with paper and graduated them; and was happy to find that, by my globe, (which was the first I ever saw,) could solve the problems.'

"For some time after this, he was very unfortunate. Finding that it would not do to remain idle at home, he engaged in the service of a miller in the neighbourhood, who, feeling, probably, that he could trust to the honesty and capacity of his servant, soon began to spend all his own time in the alehouse, and to leave poor Ferguson at home, not only with every thing to do, but with very frequently, nothing to eat. A little oatmeal, mixed with cold water, was often, he tells us, all he was allowed. Yet in this situation he remained a year, and then returned to his father's very much the weaker for his fasting. His next master was a Dr. Young, who having induced him to enter his service by a promise to instruct him in medicine, not only broke his engagement as to this point, but used him in other respects so tyrannically, that, although engaged for half a year, he found he could not remain beyond the first quarter; at the expiration of which, accordingly, he came away without receiving any wages, having 'wrought for the last fortnight,' says he, 'as much as possible with one hand and arm, when I could not lift the other from my side.' This was in consequence of a severe hurt he had received, which the doctor was too busy to look to, and by which he was confined to his bed for two months after his return home.

"Reduced as he was, however, by exhaustion and actual pain, he could not be idle. 'In order,' says he, 'to amuse myself in this low state, I made a wooden clock, the frame of which was also of wood, and it kept time pretty well. The bell on which the hammer struck the hours, was the neck of a broken bottle.' A short time after this, when he had recovered his health, he gave a still more extraordinary proof of his ingenuity, and the fertility of his resources for mechanical invention, by actually constructing a timepiece, or watch, moved by a spring. But we must allow him to give the history of this matter in his own words.

"'Having, then,' he says, 'no idea how any time-piece could go but by a weight and a line, I wondered how a watch could go in all positions; and was sorry that I had never thought of asking Mr. Cantley, who could very easily have informed me. But happening one day to see a gentleman ride by my father's house, (which was close by a public road,) I asked him what o'clock it then was? He looked at his watch and told me. As he did that with so much good nature, I begged of him to shew me the inside of his watch; and, though he was an entire stranger, he immediately opened the watch, and put it into my hands. I saw the spring-box with part of the chain round it; and he told me what it was that made the box turn round. He told me that it was turned round by a steel spring within it. Having, then, never seen any other spring than that of my father's gun-lock, I asked how a spring within a box could turn the box so often round as to wind all the chain upon it? He answered, that the spring was long and thin; that one end of it was fastened to the axis of the box, and the other end to the inside of the box; that the axis was fixed, and the box was loose upon it. I told him that I did not yet thoroughly understand the matter. "Well

my lad," says he, "take a long thin piece of whalebone, hold one end of it fast between your finger and thumb, and wind it round your finger; it will then endeavour to unwind itself; and if you fix the other end of it to the inside of a small hoop, and leave it to itself, it will turn the hoop round and round, and wind up a thread tied to the outside of the hoop." I thanked the gentleman, and told him that I understood the thing very well. I then tried to make a watch with wooden wheels and made the spring of whalebone; but found that I could not make the wheel go when the balance was put on, because the teeth of the wheels were rather too weak to bear the force of a spring sufficient to move the balance, although the wheels would run fast enough when the balance was taken off. I enclosed the whole in a wooden case, very little bigger than a breakfast tea-cup; but a clumsy neighbour one day looking at my watch, happened to let it fall, and, turning hastily about to pick it up, set his foot upon it, and crushed it all to pieces; which so provoked my father, that he was almost ready to beat the man, and discouraged me so much, that I never attempted to make such another machine again, especially as I was thoroughly convinced I could never make one that would be of any real use."

"What a vivid picture is this of an ingenious mind thirsting for knowledge! and who is there, too, that does not envy the pleasure that must have been felt by the courteous and intelligent stranger by whom the young mechanic was carried over his first great difficulty, if he ever chanced to learn how greatly his unknown questioner had profited from their brief interview! That stranger might probably have read the above narrative, as given to the world by Ferguson, after the talents which this little incident probably contributed to develop, had raised him from his obscurity to a distinguished place among the philosophers of his age; and if he did know this, he must have felt that encouragement in well-doing which a benevolent man may always gather, either from the positive effects of acts of kindness upon others, or their influence upon his own heart. Civility, charity, generosity, may sometimes meet an ill return, but one person must be benefited by their exercise: the kind heart has its own abundant reward, whatever be the gratitude of others. The case of Ferguson shews that the seed does not always fall on stony ground. It may appear somewhat absurd to dwell upon the benefit of a slight civility, which cost, at most, but a few minutes of attention; but it is really important that those who are easy in the world—who have all the advantages of wealth and knowledge at their command—should feel of how much value is the slightest encouragement and assistance to those who are toiling up the steep of emulation. Too often 'the scuff of pride' is superadded to the 'bar of poverty'; and thus it is that many a one of the best talents and the most generous feelings

Has sunk into the grave, untried and unknown,

because the wealthy and powerful have never understood the value of a helping hand to him who is struggling with fortune."—*Library of Entertaining Knowledge.*

[Such is the history of Ferguson's struggles in the early part of his life. He afterwards applied himself, apparently without the least effort, to the business of portrait-painting, by which he subsisted for several years in Edinburgh and London; till finally his philosophical powers obtained the notice and patronage which they deserved, and he stood forth one of the first men of the age. His numerous publications are well known, and have been translated into most of the European languages. He died in 1776, having, for some years, enjoyed a pension from George III., whose beneficence to men of science has conferred great lustre upon his reign as well as upon his own private character.]

A SEA FIGHT BETWEEN THE BRITISH AND FRENCH.

On the 30th of December, 1794, the British twelve-pounder, thirty-two gun frigate, *Blanche*, Captain Robert Faulkner, cruising off the island of *Désirade*, one of the dependencies of *Guadeloupe*, and in French possession, chased a large French armed schooner, under the fort at the bottom of the bay. This being accomplished, "the *Blanche*, at about 6 p. m., steered straight for *Pointe-à-Pitre*; and, on arriving within four miles of the port, lay to for the night. On the next day, the 4th, at daybreak, the *Blanche* discovered the *Pique* lying at anchor just outside of the harbour. At about 8 h. 30 m. the *Blanche* made sail to meet the French ship and schooner, until nearly within gunshot of *Fort Fleur-d'Épée*; when finding the *Pique* apparently disinclined to come out from the batteries, the *Blanche*, who had hove to, made sail to board a schooner running down along *Grande-terre*. At this time *Pointe-à-Pitre* bore from the *Blanche* north-west, distant two leagues, and the French frigate north-north-west, distant three miles.

At half-past noon, the *Pique* filled and made sail towards the *Blanche*. At 2 p. m. the *Pique* crossed the *Blanche* on the opposite tack, and, hoisting French colours, fired four shots at her. This challenge, as it might be considered, the British frigate answered, by firing a shot to windward. The battery at *Gosier* also fired two shots; but they, like those of the frigate, fell short. At 2 h. 30 m. p. m., finding that the *Pique* had tacked, and was standing towards her, the *Blanche* shortened sail for the French frigate to come up; but at 3 h. 30 m. p. m., the latter tacked and stood away.

"In hope to induce the *Pique* to follow her, the *Blanche*, under top sails and courses, stood towards *Marie-Galante*. At 7 p. m., observing the *Pique* still under *Grande-terre*, Captain Faulkner took out the American crew from the

schooner, and sent on board a petty officer and party on men. The *Blanche* then wore, and stood towards the island of Dominica, with the schooner in tow. At about 8, p.m., the French frigate was descried astern, about two leagues distant, standing after the *Blanche*. The latter immediately cast off the schooner, and, tacking, made all sail in chase.

"At about a quarter past midnight, the *Blanche*, on the starboard tack, passed under the lee of the *Pique* on the larboard tack, and returned the distant broadside which the *Pique* had fired at her. At half-past midnight, having got nearly in the wake of her opponent, the *Blanche* tacked, and, at a few minutes before 1, a.m., on the 5th, just as she had arrived within musket-shot upon the starboard quarter of the *Pique*, the latter wore, with the intention of crossing her opponent's hawse, and raking her ahead. To frustrate this manoeuvre, the *Blanche* wore also; and the two frigates became closely engaged, broadside to broadside.

"At about 2 h. 30 m. a.m., the *Blanche*, having shot ahead, was in the act of luffing up to port, to rake the *Pique* ahead, when the former's wounded mizen and mainmasts, in succession, fell over the side. Almost immediately after this, the *Pique* ran foul of the *Blanche* on her larboard quarter, and made several attempts to board. These attempts the British crew successfully resisted; and the larboard quarter-deck guns, and such of the main-deck ones as would bear, were fired with destructive effect into the *Pique*'s starboard bow; she returning the fire from her tops, as well as from some of her quarter-deck guns, run in amidst fore and aft. At a few minutes before 3, a.m., while assisting his second lieutenant, Mr. David Milne, and one or two others of his crew, in lashing, with such ropes as were handy, the bowsprit of the *Pique* to the capstan of the *Blanche*, preparatory to a more secure fastening, by means of a hawser, which was getting up from below, the young and gallant Captain Faulkner fell by a musket ball through his heart.

"At this moment, or very soon afterwards, the lashings broke loose; and the *Pique*, crossing the stern of the *Blanche*, who had now begun to pay off for the want of after-sail, fell on board the latter, a second time, upon the starboard quarter. In an instant, the British crew, with the hawser which just had before been got on deck, lashed the bowsprit of the *Pique* to the stump of their own mainmast. In this manner, the *Blanche*, commanded now by Lieutenant Frederick Watkins, toiled before the wind her resolute opponent, whose repeated attempts to cut away this second lashing, were defeated by the quick and well-directed fire of the British marines. In the meanwhile, the constant stream of musketry poured upon the quarter-deck of the *Blanche*, from the forecasteel and tops of the *Pique*, and a well directed fire from the latter's quarter-deck guns, pointed forward, gave great annoyance to the former; particularly as, having, like many other ships in the British navy at this period, no stern-ports on the main-deck, the cannonade on the part of the *Blanche* was confined to two quarter-deck six-pounders. The carpenters having in vain tried to cut down the upper transom beam, no alternative remained, but to blow away a part of it on each side. As soon, therefore, as the firemen, with their buckets, were assembled in the cabin, the two after-guns were pointed against the stern-frame. The discharge made a clear breach on both sides, and the activity of the bucket-men quickly extinguished the fire it had occasioned in the wood-work. The two twelve-pounders of the *Blanche*, thus brought into use, soon played havoc upon the *Pique*'s decks.

"At about 3 h. 15 m. a.m., the main mast of the French *Vigate* (her fore and mizen-masts having previously come down) fell over the side. In this utterly defenceless state, without a gun which, on account of the wreck of her masts, she could now bring to bear, the *Pique* sustained the raking fire of the *Blanche* until 5 h. 15 m. a.m.; when some of the French crew, from the bowsprit end, called aloud for quarter. The *Blanche* immediately ceased her fire; and every boat in both vessels having been destroyed by shot, Lieutenant Milne, followed by ten seamen, endeavoured to reach the prize by means of the hawser that still held her; but their weight bringing the bight of the rope down in the water, they had to swim a part of the distance.

"The *Blanche*, besides her 32 long 12 and 6-pounders, mounted six 18-pounder carronades, total, 38 guns; and, having sent away in prizes two master's mates and 12 seamen, she had on board no more than 198 men and boys. Of these, the *Blanche* lost her commander, one midshipman, five seamen, and one private marine killed; one midshipman, two quarter-masters, the armourer, one sergeant of marines, twelve seamen, and four private marines, wounded; total, eight killed, and twenty-one wounded.

"The *Pique* was armed with two carriage-guns, 6-pounders, less than her establishment, or 38 in all; but she mounted, along her gunwale on each side, several brass swivels. Respecting the number composing the crew of the *Pique*, the accounts are very contradictory. Lieutenant Watkins, in his official letter, states the number at 360; and Vice-Admiral Caldwell, at Martinique, when enclosing that letter to the Admiralty, says, 'many more than 360.' On the other hand, the three French officers, examined before the surrogate of the Colonial Vice-Admiralty Court, subsequently deposed, two of them, to 'between 260 and 270 men,' and the third, to 'about 270 men,' as the total number on board their ship when the action commenced. Upon these certificates, head-money was paid for 265 men; but, according to the documents transmitted along with these certificates, the actual number of men on board was 279."—*James' Naval History*.

EMIGRATION.

"I have said nothing," continues Mr. Fergusson, "hitherto of the price or value of land in Canada, and it is extremely difficult, in the settled parts of either province, to ascertain any thing like a fair average rate. Prices are

perpetually fluctuating, and must be regulated by the circumstances of the seller; one man being willing to sell his farm for five dollars an acre, under a strong desire to commence anew upon a forest tract, or labouring under necessity, while his next neighbour may probably refuse to part with similar land for less than ten or twelve dollars per acre. Of this, however, there is no doubt, that very eligible and advantageous purchases may, at all times, be made by a prudent capitalist, and that land is every year increasing in value, wherever it is desirable to possess it. Great bargains are sometimes obtained at public sales, by warrant of the sheriff, for payment of land taxes. Land thus sold is subject, for a certain short period, to be redeemed by the individual, or his heirs, who originally obtained the grant; but, as it seldom exceeds, at a sheriff's sale, 6d. or 7d. per acre, it is well worthy of a trial. Steam navigation may be said to have been created for America, and it is difficult to estimate the advances which the States and the Canadas will soon make under its influence. To emigrants it not only affords a safe, cheap, and agreeable conveyance; but from the large concourse of passengers, a fund of valuable local information may always be procured, and useful acquaintances formed; while it is impossible to overlook the silent but important effects, in clearing the forest, which the consumption of fuel on board the steam-boats is destined to accomplish. Perhaps it is not fanciful to assert, that the woods of America are now actually clearing by means of steam.

"York, the capital of Upper Canada, and seat of government, is a very desirable station for a settler to choose as head-quarters, in looking about for a purchase. He is sure, at this place, to meet with numerous offers of farms, regarding which he will do well to act with caution; and he will be able to inspect the plans of public lands in the government land-office, under the superintendence of Mr. P. Robinson, a gentleman able and willing to afford him every facility. The rich and heavy land of Upper Canada is not to be found, in general, upon the immediate banks of the lakes and rivers. It lies, for the most part, from twelve to twenty miles back, and thus compensates the enterprising settler for plunging into the forest. Government have still, I believe, about four millions and a half of acres to dispose of, besides seven or eight millions more, beyond the lines of what has been surveyed. No land is now granted to individuals without payment, the price varying according to situation and quality, and subject to the regulation of clearing and fencing five acres within two years, erecting a house 16 feet by 20, and also clearing half of the road in front.

"Another land-office, highly interesting to emigrants, is likewise to be found in York. It is here that the commissioners of the Canada Company reside, and have their principal establishment. This company, as is well known, purchased from government two and a half millions of acres in the Upper Province, with the view of disposing of it in lots to settlers, at an advanced price. The company is yet too much in its infancy to speculate upon results; but no reasonable doubt can be entertained that it must operate favourably in procuring settlers. "A great progress has been made in the formation of roads, bridges, mills, &c., which government would not, and private individuals could not, have effected in the short period which has elapsed since the establishment of the company; and, although a feeling inimical to their measures shewed itself in some quarters, I confess myself unable to discover, for that jealousy, any reasonable cause. I had very full discussions with the commissioners and agents, from which, as well as from their published proposals, I feel satisfied that emigrants of every class may commit themselves to the Canada Company, in perfect assurance of experiencing the most kind, honourable, and liberal treatment. Circumstances dependent upon the state of a new country may delay the execution of plans beyond the premised period; but there can be no doubt of the company fulfilling all their engagements as speedily as possible. The prices of land vary from 7s. 6d. to 15s. per acre. I was much impressed with the favourable opinion of the Great Huron Tract, from the fact that many steady Dutch settlers, in the possession of old productive farms near York, were, at the period of my visit, disposing of their property and removing to Goderich,—a change which the calculating Dutchmen would not have rashly adopted, without pretty reasonable prospects of bettering himself to a considerable amount. 'The township of Goderich contains about 400 inhabitants already, and several Dutch families from the neighbourhood of York have sold, or are endeavouring to sell, their cultivated and valuable farms, and have purchased lands from the company in the Huron tract. About 6000 acres have been sold them in the neighbourhood of Goderich within the last six months. In Guelph a very valuable mill has lately been erected, and one in Goderich is now in progress."

"In a young and thinly-settled country such as Canada, every accession of an industrious family, or individual, tends to the welfare of all; and it is therefore natural to suppose that such a corporation as the Canada Company would be fully awake to this principle. We find, accordingly, that in forming arrangements for forwarding emigrants to their own lands, they have offered very favourable proposals to emigrants at large. They state, that 'all persons depositing 20l. with the Canada Company's agents in Quebec and Montreal, will be forwarded to the head of Lake Ontario by steam-boats, free of expense, and have liberty to select land in any part of the province, at the current price charged by the company, when the whole amount of their deposit will be placed to their credit on account of their land. But, should they prefer purchasing from individuals, and not the company, then the expense of their conveyance will be deducted from the amount deposited, and the balance paid over to them. Persons depositing a sum equal to their conveyance, with their families and luggage, from Quebec to the head of the lake, may avail themselves of the company's contracts with the forwarders; and should

they, within three months after arrival, select land in Guelph, and pay one-fifth of the purchase-money, then the amount of their deposit in Quebec will also be placed to their credit, and they, their families, &c., be thus conveyed from Quebec free of expense."—*Agricultural Journal*. (To be continued.)

NEW SOUTH WALES.

From an interesting parliamentary paper, it appears that the average expense of transporting a convict to New South Wales, which was in 1827, 24l. 1s. 6d., is now considerably under 20l.; and that the average expense of actually maintaining and clothing a male convict there was, in 1821, 22l. 9s. 8d., but that now it does not exceed 7l. 3d. The total number of male convicts in the colony on the 1st November, 1828, including those assigned to individuals, and those allowed to provide for themselves by ticket of leave, was 14,155

The total number of female convicts under the same circumstances, was 1,513

Total 15,668
The total expenditure of the government of the colony in the year 1829, is stated to be £306,439 8 0

Of which was contributed by the colonial revenue 99,933 15 0

Leaving to be borne by the government a total of £206,505 13 0

which sum, divided by the number of convicts maintained in the colony, gives 14l. 5s. 6d. as the expense of each. It should, however, be remarked, that in the expenditure for the year 1829, are included two sums of 78,493l. and 20,000l., the former for the "provisions, clothing, fuel, and the necessaries provided in the colony for the use and maintenance of the convicts;" the latter for the estimated costs of stores sent from England, and amount of expenses incurred but not yet brought to account. The year 1829 was the last of a series of four years of drought and scarcity, and a great proportion of the wheat consumed in the colony during that year was imported from Van Dieman's Land; in consequence of this the average price was not less than 10s. per bushel, more than double the price of 1831. The price of maize during the same year was not lower in proportion than that of wheat, and animal food was also from 50 to 75 per cent. higher than it has since become; this leaves no doubt that the maintenance of the same number of convicts, which in 1829 cost 78,493l., would not in 1831, or any future year, cost more than 50,000l. The estimate for stores, materials, &c., required from England during the present year, does not exceed 7,000l.; but, on the other hand, an increase may have taken place under the head of "police, gaols, &c.," to the amount of probably 5,000l. It will consequently follow; that, supposing (as is pretty near the truth) the number of convicts maintained by the crown in ordinary service, as penal settlements, in gaols, hospitals, &c., will be the same in 1831 as it was in 1829, the demands upon the English Treasury will be reduced from 206,505l. to 170,000l., or 9l. 15s. for each convict. The aggregate of this estimate includes a sum of 64,000l. for the maintenance of troops in the protection of the colony, as well as in the control of the convicts, and all other charges to which the mother country is subjected on account of the colony.

According to a statement in a pamphlet published by Mr. Potter Macqueen, M.P. for Bedfordshire, the average expense of a culprit in the Hulks in the years 1818-19-20-21, was £34 0 0
Ditto at Millbank Penitentiary 56 15 0
The lowest estimate (that of Worcester Gaol) in a list of 11 Penitentiaries and Gaols 28 2 4
The average of the whole 11 38 7 2
The expense of sending a convict to New South Wales is, in round numbers, say 20 0 0
Annual average expense of maintenance, say 12 0 0

If, therefore, a convict is five months on his voyage, which costs 20l., and seven months in the colony at 12l. per month, there will be a saving to the nation, in the lowest estimate of Mr. P. Macqueen, of 11. 2s. 4d. for each convict in the first year of his quitting England. This clearly shows the advantages derived from transporting convicts by the mother country, where labour is so plentiful, that the punishment of the criminals interferes with the employment of the half-starved pauper.

Negro Doctor.—Of the thirteen months which Dampier spent in Virginia he has left no record: but from another portion of his memoirs, it may be gathered that he suffered from sickness during most of the time. His disease was not more singular than was the mode of cure practised by a negro Esculapius, whose appropriate fee was a white cock. The disease is what is called the Guinea-worm. "These worms," says our navigator, "are no bigger than a large brown thread, but (as I have heard) five or six yards long, and if it break in drawing out, that part which remains in the flesh will putrify, and endanger the patient's life, and be very painful. I was in great torment before it came out. My leg and ankle swelled, and looked very red and angry, and I kept a plaster to it to bring it to a head. Drawing off my plaster, out came about three inches of the worm, and my pain abated presently. Till then I was ignorant of my malady, and the gentleman at whose house I lodged took it (the worm) for a nerve; but I knew well enough what it was, and presently rolled it upon a small stick. After that I opened it every morning and evening, and strained it out gently, about two inches at a time, not without pain. The negro doctor first stroked the place affected, then applied some rough powder to it, like tobacco leaves crumbled, next muttered a spell, blew upon the part three times, waved his hands as often, and said that in three days it would be well. It proved so, and the stipulated fee of the white cock was gladly paid."—*Edinburgh Cabinet Library*.

COLUMN FOR THE BOYS.

AGREEABLY to the plan upon which I set out, I now commence a series of amusing articles for the perusal of my juvenile readers. In the execution of this willing duty, I am wonderfully assisted by a recently published volume, entitled, "THE BOYS' OWN BOOK, or a complete Encyclopedia of all the Diversions, athletic, scientific, and recreative, of Boyhood and Youth," published by Vizetelly, Branston, and Co., Fleet-street, London, 1830. Exceedingly few of my young Scottish readers can have possibly seen this delightful production, which is written with great taste and judgment. "We heartily trust that our young readers," says the author, "will commence the perusal of our pages with pleasure equal to that which we feel in sitting down to write them, and that we shall go pleasantly through our work." The description of these Minor Sports, most especially, will, we are convinced, be an agreeable pastime to us, and call up, from time to time, welcome reminiscences of those days of our boyhood, when we were a hero at 'Ring-taw,' and by no means a contemptible adversary even to the most accomplished youthful players at 'Fives.' It will remind us of our happy holidays and favourite schoolfellows;—of feats of agility performed at 'Follow my Leader,' and trophies borne off in triumph at 'Peg in the ring';—of those merry mornings, when the first glance of the sun awakened us, to snatch an additional half-hour for the play-ground, without encroaching on the allotted times for study;—when, during 'winter's surly reign,' we joined the active few, who, instead of moping in great coats, or shivering round a fire, sallied forth into the clear, cold, invigorating air, and marking out goals and bounds in the crisp hoar frost that mantled the ground, sought after, and found, warmth and high spirits in a game of 'Prisoner's Base,'—or made the brows glow at lofty 'Leap-frog,'—or defied the frost by briskly plying the whip-top with eel-skin, and came in with glad hearts, ruddy cheeks, perfect willingness, and the best of appetites, to our morning repast, and subsequent studies. It will bring to our recollection, also, those smooth and shady spots, where, when the noontide sun was midway in the heavens in the sultry month of August, we alternately perused pleasant and instructive books, and played with our class-mates at 'Increase-pound,' or set up a pyramid of marbles for them to shoot at, or shot at one erected by one of them. It will carry us back in imagination to the hills and downs, where we flew our kites,—the loftiest soarsers for miles around;—of mishaps, through breaking of strings, and long races of rivalry after our falling favourites;—to that cheerful parlour, in which, during the winter vacation, when mince-meat, plum-puddings, and young parties, were most abundant, on Christmas eve, or mirthful Twelfth-night, most especially,—we bore a part in the exhilarating and harmless fire-side sports of the season;—to that dilapidated ruin,—the court of that mouldering castle, with a tall and stately elm rising from one of its corners, and ivy, apparently age old, the constant home and nesting-place of innumerable birds, which bedecked and supported the outward side of its walls,—the scenes of our chief exploits at Fives;—to the garden walk, where our school-swing was erected, between two gigantic sister pear-trees;—and, in brief, to all those places where we played the games which were the delight of our holidays; when a sportive bout at 'Saddle my Nag,' was in itself an ample recompense for the past two hours of study, employed in working an intricate question in arithmetic,—composing a theme on some difficult subject,—rendering a portion of the Iliad into Latin hexameters, or a passage of Pope into French prose. We conceive that we are bringing no disgrace on our boyhood, by avowing that we deeply enjoyed the sports of the play-ground. The line of a talented writer, 'A dance at syntax, but a dab at law,' has, by a thoughtless few, been converted into a proverb, and those who were most eminent for their activity and love of the usual amusements of youth out of school, have thus been unjustly stigmatised as inattentive students. The reverse we have generally found to be the fact; for, we have often remarked, that the lads who led the sports in the play-ground, stood high in their classes in the schoolroom. There is a time for all things, is a trite, but, in this case, an applicable observation; the scholastic discipline wisely allots certain hours in the day for recreation; they should be employed in healthful and agreeable pastime, so as to render the boy prepared to return with mental vigour to his books;—study should give a relish to sport, and sport to study. But while we recommend that the schoolroom should not be forgotten on the play-ground, we wish to impress on our young readers the necessity of their forgetting the play-ground in the schoolroom.

Passing over what are called the *Minor Sports*, which, it is presumed, are too well understood by boys to require description, I proceed to the article on *Archery*.

In this island, Archery was greatly encouraged in former times, and many statutes were made for its regulation. The artillery company of London, though they have long disused the weapon, are the remains of the ancient fraternity of bowmen or archers. As to the time when shooting with the long bow first began amongst the English, there appears no certain account. Richard I. was killed by an arrow in 1199. After this time, we read nothing of archery, till that of Edward III., when an order was issued to the sheriffs of most of the English counties, to provide five hundred white bows, and five hundred bundles of arrows, for the then intended war against France. The famous battle of Cressy was fought four years afterward, in which it is stated that we had about two thousand archers, opposed to about the same number of French. In the fifth year of the reign of Edward IV., an act was passed, that every Englishman, and Irishman dwelling with Englishmen, should have an English bow of his own height, which is directed to be made of yew, wych hazel, ash, or awburne, or any other reasonable tree, according to their power. The next chapter also directed, that butts should be made in every township, which the inhabitants were obliged to shoot

at, every feast day, under penalty of one halfpenny, when they should omit this exercise. During the reign of Henry VIII., several statutes were made for the promotion of archery. An act of parliament, in Elizabeth's reign, regulated the price of bows. Charles I. is said to have been an archer; and, in the eighth year of his reign, he issued a commission to prevent the fields near London being so enclosed as to interrupt the necessary and profitable exercise of shooting. So lately as the year 1753, targets were erected in the Finsbury fields, during the Easter and Whitsuntide holidays, when the best shooter was styled "Captain," for the ensuing year, and the second "Lieutenant." Edward VI. in his Journal, says, that one hundred archers of his guard shot, before him, two arrows each, and afterward, altogether; and that they shot at an inch board, which some pierced quite through with the heads of their arrows, the board being well-seasoned timber. The distance of the mark is not mentioned. As a pastime, there is none, perhaps, superior to this; it is now, and for years past has been, highly popular in this country. In fact, judging from the past and the present, we may venture to predict, that—

The archer's sport will never be extinct,
Until the memory of Robin Hood,
Of Cressy's well-fought field, and Chery Chase,
Be blotted from the tablet of our minds.

The Bow.—The young Archer should, in the first place, select a bow that is fit and proper for his own size and strength. It is not probable that, let him be ever so skillful, he will be able to achieve such an exploit, as the construction of a good bow himself; bow-making being a trade which requires many years' practice and much attention. In fact, there are few persons, now-a-days, although there are many bowyers, who can manufacture bows of a superior description. [Mr. Muir, Archers' Hall, Edinburgh, is, doubtless, the most skillful bowyer of the day; and to him we recommend our young friends to apply, if they have any inclination to equip themselves in proper style, for the enjoyment of the noble pastime of Archery.]

The back of the bow is the flat outside, and the belly the round inside part of it. The round inside part is bent inward; if the bow be pulled the reverse way, it will break; therefore, however a bow may be bent when unstrung, it is invariably to be strung with the round part inward.

Arrows.—Arrows should be delicately proportioned in length and weight to the bow for which they are intended. They are used blunt or sharp, and varying in their thickness, according to the fancy of the Archer. Some are made so as to taper gradually from the feathers to the pile, and some *vice versa*; others, again, are thickest in the centre. All arrows should have their nocks or notches cased with horn, and the nocks should be of such a size, as to fit the string with exactness, and be neither too tight nor too loose. Three goose or turkey feathers are affixed to arrows; one of these, denominated the cock feather, is of a different colour from the other two; and this is always to be placed uppermost.

The Tassel.—This is very necessary to the Archer, for the purpose of cleaning the arrow from such dirt as generally adheres to it, if it enter the ground. This dirt, if suffered to remain, will impede the arrow in its flight, and also render its course untrue. The tassel is suspended on the left side of the Archers, and is thus always at hand for use.

The Glove.—The glove consists of places for three fingers, a back thong, and a wrist strap to fasten it. The finger-stalls should neither project far over the tops, nor be drawn back to cover the first joint. The glove is used for the purpose of protecting the fingers from being hurt by the string.

The Brace.—The brace is worn on the bow arm, to save it from being injured by the string, which, without this protection, would, in all probability, incapacitate the Archer from shooting long at a time. It is made of stout leather, with a very smooth surface, so that the string may glide over it without impediment.—To be continued.

ON THE STUDY OF NATURAL PHILOSOPHY.

(1). THE situation of man on the globe he inhabits, and over which he has obtained the control, is, in many respects, exceedingly remarkable. Compared with its other denizens, he seems, if we regard only his physical constitution, in almost every respect their inferior, and equally unprovided for the supply of his natural wants and his defence against the innumerable enemies which surround him. No other animal passes so large a portion of its existence in a state of absolute helplessness, or falls in old age into such protracted and lamentable imbecility. To no other warm-blooded animal has nature denied that indispensable covering, without which the vicissitudes of a temperate, and the rigours of a cold climate are equally insupportable; and to scarcely any has she been so sparing in external weapons, whether for attack or defence. Destitute alike of speed to avoid, and of arms to repel the aggressions of his voracious foes; tenderly susceptible of atmospheric influences, and unfitted for the coarse elements which the earth affords spontaneously, during at least two-thirds of the year, even in temperate climates,—man, if abandoned to mere instinct, would be of all creatures the most destitute and miserable. Distracted by terror, and goaded by famine; driven to the most abject expedients for concealment from his enemies, and to the most cowardly devices for the seizure and destruction of his nobler prey, his existence would be one continued subterfuge or stratagem;—his dwelling would be in dens of the earth, in clefts of rocks, or in the hollow of trees; his food worms, and the lower reptiles, or such few and crude productions of the soil, as his organs could be brought to assimilate, varied with occasional relics, mangled by more powerful beasts of prey, or contemned by their more pampered choice. Remarkable only for the absence of those powers and qualities which obtain for other animals a degree of security and respect, he would be disregarded by some, and hunted down by

others, till after a few generations his species would become altogether extinct, or, at best, would be restricted to a few islands in tropical regions, where the warmth of the climate, the paucity of enemies, and the abundance of vegetable food, might permit it to linger.

(2). Yet man is the undisputed lord of the creation. The strongest and fiercest of his fellow-creatures,—the whale, the elephant, the eagle, and the tiger, are slaughtered by him to supply his most capricious wants, or tamed to do him service, or imprisoned to make him sport. The spoils of all nature are in daily requisition for his most common uses, yielded with more or less readiness, or wrested with reluctance, from the mine, the forest, the ocean, and the air. Such are the first fruits of reason. Were they the only or the principal ones, were the mere acquisition of power over the materials, and the less gifted animals which surround us, and the consequent increase of our external comforts, and our means of preservation and sensual enjoyment, the sum of the privileges which the possession of this faculty conferred, we should, after all, have little to plume ourselves upon. But this is so far from being the case, that every one who passes his life in tolerable ease and comfort, or rather, whose whole time is not anxiously consumed in providing the absolute necessities of existence, is conscious of wants and cravings in which the senses have no part, of a series of pains and pleasures totally distinct in kind from any which the infliction of bodily misery, or the gratification of bodily appetites, has ever afforded him; and if he has experienced these pleasures and these pains in any degree of intensity, he will readily admit them to hold a much higher rank, and to deserve much more attention, than the former class. Independent of the pleasures of fancy and imagination, and social converse, man is constituted a speculative being. He contemplates the world, and the objects around him, not with a passive indifferent gaze, as a set of phenomena in which he has no farther interest, than as they affect his immediate situation, and can be rendered subservient to his comfort, but as a system disposed with order and design. He approves, and feels the highest admiration for the harmony of its parts, the skill and efficiency of its contrivances. Some of these which he can best trace and understand, he attempts to imitate, and finds that, to a certain extent, though rudely and imperfectly, he can succeed,—in others, that although he can comprehend the nature of the contrivance, he is totally destitute of all means of imitation; while in others, again, and those evidently the most important, though he sees the effect produced, yet the means by which it is done, are alike beyond his knowledge and his control. Thus he is led to the conception of a Power and an Intelligence superior to his own, and adequate to the production and maintenance of all that he sees in nature,—a Power and Intelligence to which he may well apply the term infinite, since he not only sees no actual limit to the instances in which they are manifested, but finds, on the contrary, that the farther he inquires, and the wider his sphere of observation extends, they continually open upon him in increasing abundance; and that, as the study of one prepares him to understand and appreciate another, refinement follows on refinement, wonder on wonder, till his faculties become bewildered in admiration, and his intellect falls back on itself, in utter hopelessness of arriving at an end.

(3). When from external objects he turns his view upon himself,—on his own vital and intellectual faculties, he finds that he possesses a power of examining and analyzing his own nature to a certain extent, but no farther. In his corporeal frame he is sensible of a power to communicate a certain moderate amount of motion to himself and other objects; that this power depends on his will, and that its exertion can be suspended or increased at pleasure within certain limits; but how his will acts on his limbs he has no consciousness; and whence he derives the power he thus exercises, there is nothing to assure him, however he may long to know. His senses, too, inform him of a multitude of particulars respecting the external world, and he perceives an apparatus by which impressions from without may be transmitted, as a sort of signals, to the interior of his person, and ultimately to his brain, wherein he is obscurely sensible that the thinking, feeling, reasoning being he calls himself, more especially resides, but by what means he becomes conscious of these impressions, and what is the nature of the immediate communication between that inward sentient being, and that machinery, his outward man, he has not the slightest conception.

(4). Again, when he contemplates still more attentively the thoughts, acts, and passions of this sentient intelligent self, he finds, indeed, that he can remember, and by the aid of memory, can compare and discriminate, can judge and resolve, and, above all, that he is irresistibly impelled, from the perception of any phenomenon without or within him, to infer the existence of something prior which stands to it in the relation of a cause, without which it would not be, and that this knowledge of causes and their consequences is what, in almost every instance, determines his choice and will, in cases where he is nevertheless conscious of perfect freedom to act or not to act. He finds, too, that it is in his power to acquire more or less knowledge of causes and effects according to the degree of attention he bestows upon them, which attention is again in great measure a voluntary act; and often when his choice has been decided on imperfect knowledge or insufficient attention, he finds reason to correct his judgment, though perhaps too late to influence his decision by after consideration. A world within him is thus opened to his intellectual view, abounding with phenomena and relations, and of the highest immediate interest. But while he cannot help perceiving that the insight he is enabled to obtain into this internal sphere of thought and feeling is in reality the source of all his power,—the very fountain of his predominance over external nature,—he yet feels himself capable of entering only very imperfectly into these recesses of his

own bosom, and analyzing the operations of his mind,—it is this as in all other things, in short, "a being darkly wise," seeing that all the longest life and most vigorous intellect can give him power to discover by his own research, or time to know by availing himself of that of others, serves only to place him on the very frontier of knowledge, and afford a distant glimpse of boundless realms beyond, where no human thought has penetrated, but which yet he is sure must be no less familiarly known to that Intelligence which he traces throughout creation, than the most obvious truths which he himself daily applies to his most trifling purposes. Is it wonderful that a being so constituted should first encourage a hope, and by degrees acknowledge an assurance, that his intellectual existence will not terminate with the dissolution of his corporeal frame, but rather that in a future state of being, disencumbered of a thousand obstructions, which his present situation throws in his way, endowed with acuter senses, and higher faculties, he shall drink deep at that fountain of beneficent wisdom for which the slight taste obtained on earth has given him so keen a relish!—HARSHILL. *Lardner's Cyclopædia.*

To be continued.

ODE TO POVERTY.

I formerly announced that no poetry should be admitted into the Edinburgh Journal. This, I find, has occasioned regret among some very respectable persons. Poetry, they say, is a branch of the Belles Lettres, tending to polish, soften, and humanize. I therefore have resolved to admit occasionally short poems—only of such a nature, however, as are really calculated to have any effect in improving the minds or hearts of my readers. Of such a nature I judge the following composition, which appeared in Blackwood's Magazine, for April, 1839. It is the production of a humble Scottish rustic—William Park—who acts as farm servant, or "minister's man," to the Rev. Mr. Brown of Eskdale-Muir. That sentiments so refined, and thoughts so profound should reside in a peasant, whose opportunities of improving his mind are probably of the most limited nature, is in itself most wonderful, and proves, if proof were wanting, how highly the rural people of Scotland are exalted in the scale of intellect. It also proves a far more important thing—that there is no lot so mean but it may be ennobled by virtuous feeling, and the triumphs of unborn genius.

Hail! mighty power! who o'er my lot
President uncontroll'd and free;
Sole ruler of the rural cot,
I bid thee hail, dread Poverty!
Thine aid I crave to guide my strain,
Nor shall I supplicate in vain.

When on this world of woe and toil,
A helpless stranger I was cast,
Like mariner on desert isle,
The sport and victim of the blast,
Thy russet robe was o'er me flung,
And to thy cold, lean hand I clung.

In youth I felt thy guardian care,
Each saving, self-denying law,
Awful for those of fortune's spare,
I learnt and practised in thy school;
And of my lengthen'd life at large,
Thou still hast taken special charge.

Much have I seen—much more I've heard,
Of chance and change in this vain world;
The low to high estate prefer'd—
From high estate the haughty hurl'd;
But chance or change ne'er pass'd o'er me—
I'm still thy subject, Poverty!

(Oh how unwise are they who scorn
Thy homely garb and homely fare;
Who scale the tropic's burning bourne,
Ideal happiness to share;
They tread the wild, and plough the wave,
In quest of gold—but find a grave.)

There are who know thee but by name,
Who spurn thy salutary laws,
And count thy badge a mark of shame,
And hold it sin to own thy cause;
Fools that they are! they never knew
Thy guiltless pride—thy spirit true.

Pull off in danger's darkest day
Thy sons have proved their country's shield,
When wealth's effeminate array
Appear'd not on the battle field:
'Twas theirs to grasp the patriot brand,
That dropp'd from luxury's servile hand.

Pull off, where wealth-engender'd crime
Roll'd o'er the lands its whelming tide,
Their fervent faith and hope sublime
Have staid the flood, though sorely tried;
In virtue's heavenward path they trod,
When Pleasure's sons forsook their God.

And yet nor stone, nor port's strain,
Records their honours undim'd;
Even poverty would weave in vain
The laurel wreath for penny's child;
Should fashion sneer, or fortune frown,
'Twould wither ere the sun went down.

But greater, happier far is he,
More ample his reward of praise,
Though he should misery's kinsman be,
Though hardships cloud his early days,
Who triumphs in temptation's hour,
Than he who wins the warlike tower.

What though he may not write his name
On history's ever living page;
What though the thrilling tramp of fame
Echo it not from age to age;
'Tis blazon'd wide in realms on high,
Keruli'd in records of the sky.

What though the hireling hand be mute,
When humble words for notice call,
There wants not voice of harp or lute
To hymn its high in heavenly halls;
Around the cell where virtue weeps,
His nightly watch the seraph keeps.

If peace of mind your thoughts employ,
Ye restless murmuring sons of earth!
Ah! shun the splendid haunts of joy,
Fence dwells not with unshy mirth;
Ret oft amidst a crowd of woe,
As in the desert blooms the rose.

Thick fly the hostile shafts of fate,
And wreck and ruin mark their course,
But the pure spirit, firm, sedate,
Nor feels their flight, nor fears its force;
So storms the ocean's surface sweep,
While calm below the waters sleep.

O! may eternal peace be mine,
Though outward woes urge on their way,
And Hope do then my path define,
And light it with thy radiant star.
Then, Hope! who through the shades of sorrow,
Couldst trace the dawn of joy's bright morrow.

LION HUNTING.—Ten or twelve colonists, mounted and armed with their large guns, go out, and having, with the assistance of their dogs and Hottentots, ascertained where the spoiler lies, approach within a moderate distance, and then alighting, make fast the horses to each other by their bridles and halters. They then advance to within about thirty paces, backing the horses before them, knowing to within what distance, and being aware, from his aspect and motions, whether he is likely to anticipate their attack. As they advance, the lion at first surveys them calmly, and wags his tail as in a pleased or playful humour; but when they approach nearer, he begins to growl, and draws his hind parts under his breast till almost nothing of him is seen, except his bushy, bristling mane, and his eyes of living fire gleaming fiercely from the midst of it. He is now fully enraged, and only measuring his distance in act to spring upon his audacious assailants. This is the critical moment, and the signal for half the party to fire. If they are not successful in killing him at the first volley, he springs like a thunderbolt upon the horses. The rest of the party then pour in their fire upon him, which seldom fails to finish his career, though, perhaps, with the loss of one or more horses; and sometimes, though more rarely, some even of the hunters are destroyed in these dangerous encounters. —*Thomson's Travels in Africa.*

THE HUMMING BIRD.—Frequently as the humming bird has been described since it was seen by Dampier, his account of this the most delicate and lovely of the feathered tribe, is as fresh and beautiful as when the young seaman, charmed with its loveliness, first entered a description of it in his rude journal:—"The humming bird is a pretty little feathered creature, no bigger than a great overgrown wasp; with a black bill no bigger than a small needle, and with legs and feet in proportion to its body. This creature does not wave its wings like other birds when it flies, but keeps them in a continued quick motion, like bees or other insects; and like them makes a continued humming noise as it flies. It is very quick in motion, and haunts about flowers and fruit like a bee gathering honey; making many addresses to its delightful objects, by visiting them on all sides, and yet still keeps in motion, sometimes on one side, sometimes on the other, as often rebounding a foot or two back on a sudden, and as quickly returns again, keeping thus about one flower five or six minutes or more."—*Edinburgh Cabinet Library.*

THE NATURE AND PROPERTIES OF MILK.—The chemical properties of this secretion differ somewhat in different animals. The milk of the cow has been most attentively examined, and it has the following properties:—"1. It is nearly opaque; white, or slightly yellow; of an agreeable sweetish taste, and a peculiar smell. Its specific gravity varies from 10.18 to 10.20. It boils at a temperature a little above that of water, and freezes at 32 deg. When allowed to remain a few hours at rest, a thick unctuous liquid collects upon its surface, called cream; the colour of the remaining milk becomes bluish white, and when heated to about 100 degrees, with a little rennet, it readily separates into a coagulum, or curd, and a serum, or whey. In this way, the three principal constituents of milk are separable from each other. 2. By the process of churning, cream is separated into butter and buttermilk; the latter being the whey united to a portion of curd. Butter may be considered as an animal oil, containing a small portion of curd and whey. 3. The curd of milk has the leading properties of coagulated albumen. Curd, in combination with various proportions of butter, constitutes the varieties of cheese. That containing the largest quantity of oil becomes semi-fluid when heated; it is prone to decomposition, and a large quantity of ammonia is then formed in it; whereas but cheese, which consists of little else than curd or albumen, shrinks and dies when heated, curling up like a piece of horn. 4. Whey is a transparent fluid, of a pale yellow colour, and a sweetish flavour; by evaporation, it affords a minute quantity of saline matter, and a considerable proportion of sugar of milk."—*Library of Agricultural and Horticultural Knowledge.*

WILLIE COSSAR PINS.—The large pins which the common people at present denominate *Willie Cossars*, were formerly called *bottle pins*, on account of their price, only four of them being given by the chapman for a halfpenny. The change of their name is said in the south country to have been occasioned by a remarkable circumstance. There was once a wandering madman, named Willie Cossar, who bore a terrible character everywhere for his rabid disposition. This personage one day walking along an unfrequented road, met a poor woman, who did not know his person. He asked her if she were not afraid to walk abroad by herself, considering the numerous dangers which beset solitary, and especially female travellers. She answered that she never dreaded any thing in her journeys, except the chance of encountering a wild man of the name of Willie Cossar. Willie was so enraged at this, that, out of revenge, he picked out her eyes with a large bottle pin. That species of pins thenceforward received his name. This circumstance occurred within the last seventy or eighty years.

NIGHT-FALL IN ITALY. In Mr. Bell's observations on Italy, the night-fall is thus powerfully described:—"The serenity of the approach of night in these fine climates is most soothing; yet so sudden is the fall of evening, that while we are just beginning to trace the rising stars, day is gone. But how beautiful—how grand is the contemplation

of nature at this hour! how splendid the spangled sky! how soft the milky-way, clearly defined in its long course, as it lies spread out in the heavens! while, perhaps, from light clouds in the distant horizon, the harmless lightning plays, as if to mock the fire-fly, which, rising from every spot, deepened, soars and plies its busy wings, filling the air with incessant bright alternations of light and shade, and seeming to give life to the silence and stillness of the night.

ACCOUNT OF THE PHOENIX.—Professor Rennie, in a recent lecture at the King's College, gave an elaborate account of the far-famed Phoenix, which ought to prove not a little interesting to individuals trading under the name of this bird in insurance offices, iron companies, engine factories, stage coaches, steam packets, race horses, coal wharfs, coffee houses, and innumerable other heterogeneous things—imagined, it may be supposed, to derive a mysterious influence from the name of Phoenix. The earliest account of the Phoenix is given by Herodotus, the father of history; and this has been copied with additions, (a story seldom loses in its transmission,) by Pliny, Tacitus, Pomponius, Mela, Horapolla, Mariana, and other writers. Among the rest, our old English writer Bartholomew Glanville, as translated by Trevisor, and printed in black letter by Wynkyn de Worde, in 1498, says:—"St. Ambrose, in Exameron, sayth: of the humour or ashes of fenix ariseth a newe byrde and wexeth, and, in space of tyme, he is clothed with fethers and wyngis, and restored into the kind of a byrde, and is the most fairest byrde that is—most like to the peacock in fethers, and loveth wilderness, and gadeth his meate of cleane greenes and fruites. Alanus speketh of this byrde, and saith, that when the hyghest byshop Onyas had buylded a temple in the cite of Heliopolis in Egypt, to the lykness of the temple of Jerusalem, and the fyrste daye of Easter, whaene he hadde gathered much sweets smelling wood, and sette it on fyre upon the altar to offer sacrifice, to all mennes syghts suche a byrde came sodaynely, and fell into the myddel of the fyre and was brente anon to ashes in the fyre of the sacrifice; and the ashes abode there, and was busely kept and saved by the commandement of the preeste; and within three dayes, of these ashes was bred a lyttel worme, that took the shape of a byrde attle the laste, and flew into the wyldernes." This account, Mr. Rennie remarked, "of a worm being generated out of the ashes of a sacrifice, and afterwards becoming a bird, is precisely of a piece with the methods given by Virgil and Columella for the generation of bees from dead carcasses, which originated in an imperfect knowledge of the natural history of insects, as I have explained at length in *Insect Transformations*; while the appearance of a bird alighting on the altar must have obviously arisen from some eagle or vulture pouncing upon the carcass of the animal sacrificed.—a circumstance, I should imagine, of occasional occurrence when altars were situated in the open air, and which in Greece or Rome, instead of the bird's being considered a phoenix, would have been hailed as an *avatar* (if I may borrow the braminical term) of Jupiter himself. That such were the circumstances, which in process of time were worked up into the fabulous and fanciful stories of the phoenix, I have no doubt; and it appears to me, that this is the only plausible and rational explanation which can be given; though a vast deal of learning, and no little ingenuity has been expended in other views." This account is strongly corroborated by an anecdote given by Bruce the traveller, of an eagle (*gyapetus barbatus*, Stor.) in the very country where the phoenix was said to appear, darting down while his party were dining in the open air, and carrying off a part of their dinner. It is farther remarkable, that Bruce says of this genuine phoenix, as we may call it, that "the feathers of the belly and breast were of a gold colour," which might almost pass for a translation of Pliny's description of the ancient phoenix. Mr. Rennie exhibited a specimen of this bird to a numerous audience, whose curiosity of the subject had attracted to the lecture.

PUBLIC LIBRARIES OF EUROPE.—We are enabled to state the exact number of these useful establishments, though, on a superficial enumeration, they cannot amount to fewer than between seven and eight hundred; the contents of which have been estimated by Malthus at 19,847,000 volumes. Of these contents, there are preserved in

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